

Chambers's Practical Concentric Arithmetics

By

A HEAD TEACHER

With Original Ideas and Wide Practical Experience

Edited by

W. WOODBURN

Author of Chambers's 'Thorough Arithmetics'

BOOK II

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Chambers's Practical Concentric Arithmetics.

Book II.

Exercise 1.—Revision, using numbers not exceeding 100.

- (1) Tom had **94** marbles. He lost **18** on Monday, **27** on Tuesday, and **24** on Wednesday. How many had he then?
- (2) A farmer had **24** sheep. He bought **36**, and then **28**. How many had he then?
- (3) John steps **18** inches, and Sam **16** inches. How much farther will John go than Sam in **6** steps?
- (4) Oranges are **7** for **6d.** How many can I buy for half-a-crown?
- (5) There are **6** knitting-needles in a packet. How many needles are there in **15** such packets?
- (6) A sack of flour weighs **16** stones. How many stones will **5** such sacks weigh?
- (7) Half a stone of sugar cost **18** pennies. How many pennies will **2** stones cost?
- (8) What is **3** times **27** nuts?
- (9) Share **84** marbles equally among **6** boys.
- (10) A steamer goes **15** miles an hour. If it does not stop, how far will it go in **5** hours?
- (11) There are **24** pennies in a florin. How many pennies are there in **3** florins?
- (12) A crown is **5** shillings. How many shillings are there in **18** crowns?
- (13) A desk is **3** feet long. How far would **26** desks reach if placed end to end?
- (14) **72** pins - **39** pins.
- (15) **72** tops \div **4**.
- (16) **45** hats + **27** hats.
- (17) How many half-dozens are there in **84**?
- (18) Make up a sum about hens, and work it.

114
1627

Exercise 2.—Revision and Numeration over 100.

- (1) Add together **37** marbles, **28** marbles, **46** marbles, and **39** marbles.
- (2) A farmer had **150** sheep. He sold **67** of them. How many had he then?
- (3) Add together the following: **47**, **38**, and **54**. Write your answer in words.
- (4) Write the following in words: **167** sheep, **47** sheep, **269** sheep, and **69** sheep. How many sheep in all?
- (5) Add together the following, and write the answers in words: (a) **37** nuts, **129** nuts, **368** nuts, **47** nuts; (b) **48** apples, **139** apples, **74** apples, **209** apples; (c) **67** oranges, **49** oranges, **69** oranges, **39** oranges; (d) **79** peas, **38** peas, **206** peas, **308** peas.
- (6) (a) Take **67** inches from **96** inches; (b) take **38** books from **87** books; (c) take **124** nuts from **203** nuts; (d) take **47** hats from **100** hats.
- (7) How many books in **6** parcels, each containing **38**?
- (8) Three feet make a yard. How many feet are there in **29** yards? How many in **37** yards?
- (9) There are **38** rows of cabbages, and **4** cabbages in a row. How many cabbages are there altogether?
- (10) Share equally **360** nuts among **3** boys; among **4** boys; among **5** boys; among **6** boys.
- (11) What is one-fifth part of **375** buns?
- (12) How many pennies are there in **269** farthings?
- (13) I have **339** plants. If I put them **6** in a row, how many rows have I, and how many plants are left?
- (14) A farmer had **59** sheep, and his brother had **5** times as many. How many had the brother?
- (15) A boy had **202** nuts in a bag. He kept **27** for himself, and shared the rest equally among his five brothers. How many did each brother get?
- (16) A monitor had **84** tickets in one box, and **72** in another. He shared all the tickets equally among five other boys and himself. What was one boy's share?
- (17) Write out a sum about **5** books, and work it.

Exercise 3.—7 Times Table—with Revision.

- (1) **7** boys get **27** tickets each. How many do they get altogether?
- (2) Each of your boxes contains **39** tickets. How many tickets will **7** of you have?
- (3) There are six boys in a row. If each of their ticket-boxes contains **57**, how many tickets have they altogether?
- (4) (a) How many are **7** times **57** books; (b) how many are **7** times **48** books; (c) how many are **7** times **69** books; (d) how many are **7** times **35** books?
- (5) There are **18** houses in a street, and **7** windows in each house. If each window has **6** panes, how many panes are there?
- (6) The boys in a school are put **7** in a row. There are **58** rows, and **4** boys over. How many boys are there?
- (7) How many pennies are there in **65** sixpences?
- (8) **6** boys have **28** tickets each, and **7** boys have **35** each. How many tickets have they among them?
- (9) **6** men have **28** shillings each. How many short of **190** shillings have they in all?
- (10) John had **37** marbles. He bought **7** bags, each containing **56** marbles. How many had he then?
- (11) A man has **6** baskets, each containing **3** dozen plums. If **47** are bad, how many are fit to eat?
- (12) A sack of bran weighed **7** stones. How many stones would **56** such sacks weigh?
- (13) A greengrocer had **420** oranges. He sold **4** dozen to each of **7** customers. How many had he then?
- (14) A train started with **372** passengers. **39** got out at one station, and **54** got in. How many persons were in the train then?
- (15) One side of a square plot measures **7** yards. How far will a boy walk who goes five times round it?
- (16) A boy had **27** marbles. Another boy had six times as many. How many had they both together?
- (17) **37** boys \times **5**. (18) Take **49** from **72**.
- (19) Make up a sum about **7** boys, and work it.

Exercise 4.—Division—with Revision.

- (1) Share **264** tickets equally among **6** boys; among **4** boys; among **3** boys; among **5** boys.
- (2) How many bags, each holding **7** pounds, can be filled from **385** pounds of flour?
- (3) Share **483** sovereigns equally among **7** men.
- (4) A man had a ball of string **379** yards long. How many pieces, each **7** yards long, could he cut from it?
- (5) Eggs are **7** for sixpence. How many sixpences will buy **329** eggs?
- (6) A boy had **95** nuts. He ate **27**, and shared the rest equally among **4** boys. How many did each get?
- (7) A farmer had **247** chickens. He sold **36** on Monday, **27** on Tuesday, and **84** on Wednesday. How many had he then?
- (8) A grocer had a ball of string measuring **338** yards. If he cut it into lengths, each **6** yards long, how many would he have?
- (9) A carrier has **336** pounds weight of loaves on his cart. If each loaf weighs **4** pounds, how many loaves has he?
- (10) A farmer has **6** fields sown with peas. If he gets **48** bags of peas from each field, how many bags will he have altogether?
- (11) John has **128** tram-tickets, and James has **235**. If they put them together, and share them equally among **6** boys, how many will each boy get?
- (12) What is each figure worth in the following numbers:
—**236** hens, **496** pigs, **645** peas, **837** marbles?
- (13) Add both upwards and crossways the following:

36	144	156	106	268
149	36	29	287	19
98	187	306	38	49
247	87	49	129	78
78	264	208	47	227
- (14) A boy has **92** marbles. If he sells a quarter of them, how many has he then?
- (15) Make up a sum about sharing, and work it.

Exercise 5.—Measuring—and Miscellaneous Exercises.

- (1) The long side of a book measures **6** inches, and the short side **4** inches. How far is it round **7** such books?
- (2) It takes **7** feet of cloth to make a coat and vest. How many coats and vests can be made from a piece of cloth measuring **136** feet?
- (3) Measure, in inches and tenths of an inch, how far it is round your exercise-book.
- (4) Measure your lead-pencil. How far will **6** such pencils reach?
- (5) There are **7** pounds in half a stone. How many half-stones in a sack of flour weighing **228** pounds?
- (6) A boy has **27** marbles. He buys **38** bags, with **7** marbles in a bag. How many marbles has he now?
- (7) Eggs are **7** for **6d.** A man has **448** in a box. If he sold them all, how many shillings would he get?
- (8) A caddie is paid **6d.** per round for his work. How many rounds must he go to earn **180** pence?
- (9) A rail is **7** feet long. How many rails would be needed to go round a square garden if each side measured **42** feet?
- (10) The long side of a table measures **8** feet, and the short side **6** feet. How many feet will a boy walk if he goes **6** times round the table?
- (11) **36** inches make a yard. How many inches does a fence measure if it is **7** yards long?
- (12) A class-room is **216** inches high. If a lead-pencil is **6** inches long, how many would be needed to reach the top?
- (13) One side of a square field measures **47** yards. Fencing costs **5s.** per yard. How many shillings will it cost to fence the field?
- (14) A tape-measure is **22** yards long. How much short of **200** yards is **7** times that length?
- (15) Write down a sum about measuring the desk, and do it.

Exercise 6.—Money (Addition and Subtraction).

- (1) Add together $9\frac{1}{2}d.$, $4\frac{1}{2}d.$, $3\frac{1}{4}d.$, $3\frac{3}{4}d.$
 - (2) Add together $6\frac{3}{4}d.$, $7\frac{1}{4}d.$, $8\frac{1}{2}d.$, $1\frac{1}{4}d.$
 - (3) Add together $8\frac{1}{2}d.$, $3\frac{1}{2}d.$, $2\frac{1}{4}d.$, $1\frac{3}{4}d.$
 - (4) Add together $7\frac{1}{4}d.$, $1\frac{1}{4}d.$, $2\frac{3}{4}d.$, $4\frac{1}{4}d.$
 - (5) Add together $8\frac{1}{4}d.$, $5\frac{1}{2}d.$, $6\frac{1}{4}d.$, $4\frac{3}{4}d.$
 - (6) Take $4\frac{1}{2}d.$ from $9\frac{3}{4}d.$ Take $5\frac{1}{4}d.$ from $8\frac{1}{2}d.$
 - (7) Take $3\frac{1}{4}d.$ from $7d.$ From $9d.$ take $7\frac{1}{4}d.$
 - (8) Take $8\frac{1}{4}d.$ from $9\frac{3}{4}d.$ Take $6\frac{1}{2}d.$ from $8d.$
 - (9) From $7\frac{1}{2}d.$ take $3\frac{3}{4}d.$ From $10\frac{1}{2}d.$ take $9\frac{3}{4}d.$
 - (10) Take $5\frac{3}{4}d.$ from $9\frac{1}{4}d.$ From $11d.$ take $8\frac{1}{2}d.$
 - (11) Find the sum of $8\frac{1}{2}d.$ and $5\frac{1}{4}d.$
 - (12) I spend $1s.$ $4\frac{1}{2}d.$ on a ball, $2s.$ $5\frac{1}{2}d.$ on a book, and $1s.$ $6\frac{1}{2}d.$ on colours. How much do I spend in all?
 - (13) Add together, both vertically and horizontally:

(a)	(b)	(c)	(d)
(e) $1s.$ $4d.$	$1s.$ $9\frac{1}{2}d.$	$2s.$ $5\frac{1}{4}d.$	$1s.$ $6\frac{1}{4}d.$
(f) $1s.$ $7\frac{1}{2}d.$	$2s.$ $6\frac{1}{4}d.$	$3s.$ $4\frac{3}{4}d.$	$9\frac{3}{4}d.$
(g) $2s.$ $7\frac{1}{4}d.$	$8\frac{1}{2}d.$	$9\frac{3}{4}d.$	$1s.$ $4\frac{1}{2}d.$
(h) $1s.$ $8\frac{3}{4}d.$	$2s.$ $4\frac{1}{2}d.$	$3s.$ $6\frac{1}{4}d.$	$2s.$ $6\frac{1}{4}d.$
(i) $3s.$ $7\frac{1}{2}d.$	$1s.$ $9\frac{1}{4}d.$	$3s.$ $6\frac{1}{2}d.$	$3s.$ $8\frac{1}{4}d.$
 - (14) Take $1s.$ $8\frac{1}{2}d.$ from three shillings.
 - (15) What is the difference between $4s.$ $7d.$ and $1s.$ $1\frac{1}{2}d.$?
 - (16) How much is $9\frac{1}{2}d.$ less than $1s.$ $8d.$?
 - (17) How much greater is $4s.$ $7d.$ than $2s.$ $8\frac{1}{2}d.$?
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- (18) Add together $2\frac{3}{4}$ inches, $4\frac{1}{2}$ inches, $6\frac{1}{4}$ inches, $7\frac{1}{4}$ inches.
 - (19) Add the following:

(a)	(b)	(c)	(d)
1 foot 3 inches.	1 foot 6 inches.	$3\frac{1}{2}$ yards.	$3\frac{3}{4}$ quarts.
1 foot 4 inches.	2 feet 9 inches.	$2\frac{1}{4}$ yards.	$1\frac{1}{2}$ quarts.
3 feet 6 inches.	3 feet 4 inches.	$6\frac{1}{2}$ yards.	$6\frac{3}{4}$ quarts.
2 feet 8 inches.	2 feet 8 inches.	$1\frac{1}{4}$ yards.	$1\frac{1}{4}$ quarts.
 - (20) 4 boards have the following lengths: 2 feet 7 inches, 1 foot 9 inches, 2 feet $1\frac{1}{2}$ inches, 3 feet $6\frac{1}{2}$ inches. How far would they reach if placed end to end?

Exercise 7.—Money Exercises.

- (1) A boy wrote 1s. $8\frac{1}{2}$ d. for 8s. $1\frac{1}{2}$ d. What was the amount of his mistake?
- (2) A boy had 1s. $6\frac{1}{2}$ d. He got 5s. 0d. from his father, and spent 3s. 8d. on a bat. How much had he then?
- (3) A man had a half-crown, a florin, and a sixpence in his pocket. If he had already spent 5s. 8d. on boots, and 1s. 9d. on socks, how much had he at first?
- (4) A grocer sold 6 pounds of tea at 2s. 8d. a pound. How much money did he receive?
- (5) What will the following bill amount to: Gloves, 2s. $11\frac{1}{2}$ d.; stockings, 1s. $10\frac{1}{2}$ d.; cap, 1s. $3\frac{1}{2}$ d.; 3 ties at 9d. each?
- (6) What is the amount of the following bill: Cotton, 2s. $11\frac{1}{2}$ d.; lining, 1s. $9\frac{1}{2}$ d.; needles, $3\frac{1}{2}$ d.; lace, 3s. 9d.?
- (7) Find the total of the following: Bat, 2s. 9d.; wickets, 2s. $6\frac{1}{2}$ d.; 4 balls at $6\frac{1}{2}$ d. each; leggings, 1s. $8\frac{1}{2}$ d.
- (8) A boy buys 7 books at 8d. each, and has 2s. $4\frac{1}{2}$ d. left. What had he at first?
- (9) A boy has 3 half-crowns in a purse. He pays bills of 2s. $9\frac{1}{2}$ d., 2s. $8\frac{1}{2}$ d., and 1s. $7\frac{1}{2}$ d. How much change has he?
- (10) In the following, subtract the less from the greater:
(a) 3s. $9\frac{1}{2}$ d.; 4s. $6\frac{1}{4}$ d. (b) 6s. $4\frac{1}{4}$ d.; 2s. $8\frac{3}{4}$ d.
(c) 9s. $7\frac{1}{2}$ d.; 3s. $6\frac{1}{2}$ d. (d) 8s. $6\frac{1}{2}$ d.; 5s. $9\frac{1}{2}$ d.
(e) 3s. $8\frac{1}{2}$ d.; 6s. $9\frac{1}{4}$ d. (f) 4s. $8\frac{1}{2}$ d.; 2s. $9\frac{3}{4}$ d.
- (11) A woman has a half-crown, a florin, 2 shillings, and 2 sixpences in her purse. She spends 1s. $9\frac{1}{2}$ d., 3s. 6d., 1s. $7\frac{1}{2}$ d. How much has she then?
- (12) A boy earns 4s. 9d. per week, and spends 3s. $10\frac{1}{2}$ d. per week. How much does he save in 7 weeks?
- (13) John has 3s. $9\frac{1}{2}$ d., and his sister 10d. more. How much have they together?
- (14) Ducks are 2s. 9d. each, and hens 3s. 6d. each. If a man buys 5 ducks and 5 hens, how much more do the hens cost than the ducks?
- (15) Make up a sharing sum about 5 girls and a boy, and work it.

Exercise 8.—Money—including Division.

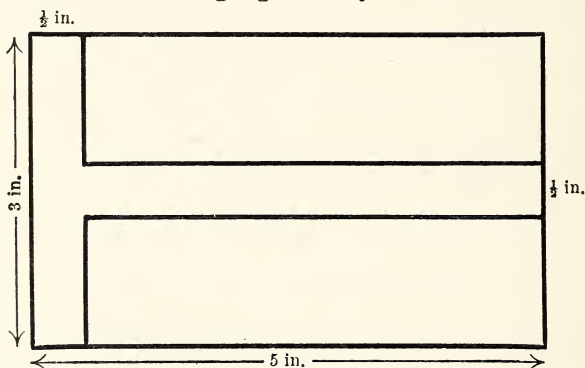
- (1) 3s. 6d. \div 2, 3, 4. (2) 4s. 9d. \div 2, 3, 4.
(3) 3s. 9d. \div 3, 5. (4) 8s. 9d. \div 5, 7.
(5) 6s. 9d. \div 6, 4. (6) 8s. 2d. \div 7, 4.
(7) 7s. 6d. \div 6, 4, 5. (8) 4s. 8d. \div 7, 4.
- (9) I pay 8s. 9d. for 7 books. How much is that each ?
(10) What is the seventh part of 9s. 11d. ?
(11) How many books at 5d. each can I buy for 325 pence ?
(12) 6 pounds of ham cost 5s. 6d. How much was that per pound ?
(13) 5 caps cost 7s. 6d. How much was that each ?
(14) 7 pounds of beef cost 5s. 6½d. How much was the beef per pound ?
(15) John spent 9½d. on a ball, 3s. 8d. on a bat, 2s. 11d. on wickets, and 10d. on a belt. How much did he spend altogether ?
(16) A boy took 7s. 6d. to buy some books. They cost 6s. 8d. How much change did he get ?
(17) A pair of boots cost 3s. 8d. How much will four pairs like them cost ?
(18) A boy had 3s. 9d. He sold 5 rabbits at 1s. 8½d. each. How much had he then ?
(19) A gentleman shared 15s. 2d. equally among 7 poor boys. How much did each boy get ?
(20) Tom went to a shop with half-a-sovereign. He bought flour for 2s. 8½d., sugar for 10½d., and butter for 1s. 4½d. How much change should he get ?
(21) A man gave 17s. 6d. for 6 ducks. How much was that for each duck ?
(22) A woman went shopping with 10s. She bought beef for 2s. 9½d., potatoes for 1s. 2½d., tea for 2s. 6d., and sugar for 5½d. How much had she left ?
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- (23) A man bought 5 casks of oil, each containing 36 gallons. He sold it out in 6-gallon jars. How many jars did he need ?
(24) Make up a sum about selling cheese, and work it.

Exercise 9.—Money—The Four Rules.

- (1) A boy had **15s. 6d.** He spent **5s. 8d.** on boots, **1s. 9d.** on a jersey, and **1s. 6d.** on a belt. How much had he then?
 - (2) Jane went shopping with **4** half-crowns. She bought flour for **2s. 8d.**, lard for **9d.**, sugar for **10d.**, and butter for **1s. 4d.** How much had she then?
 - (3) What is the cost of **7** pairs of socks at **1s. 8d.** per pair?
 - (4) What is left after spending **8s. 8½d.** out of **15s. 0d.**?
 - (5) Apples are **3s. 6d.** per stone. What is the cost of **5** stones?
 - (6) A woman had **3s. 7½d.** left after buying **7** yards of flannel at **9d.** per yard. How much had she at first?
 - (7) A man shared **15s. 9d.** equally among **7** boys. How much did each get?
 - (8) What is the total cost of **4** pounds of sugar at **3½d.** per pound, **5** pounds of lard at **9½d.** per pound, and **2** pounds of butter at **1s. 4½d.** per pound?
 - (9) A boy spent half his money in buying a bat for **4s. 9d.** How much had he at first?
 - (10) What sum is **7** times smaller than **10s. 6d.**?
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- (11) Count the number of doors in the school. If each is **7** feet long, how long are they altogether?
 - (12) In a large tank there are **182** gallons of oil. If this is put into **7** barrels of equal size, how many gallons are put into each barrel?
 - (13) There are **520** yards on a ball of twine. A quarter is cut off. If the remainder is cut up into **5**-yard lengths, how many lengths will there be?
 - (14) It takes **7** half-yards of cloth to make a suit. How many suits can be made from **58** yards?
 - (15) There are **156** bananas on a bunch. If they are sold at **2** for **½d.**, how many pennies are they worth?
 - (16) How much is **268** less than four hundred?
 - (17) What number is a quarter of **376**?
 - (18) Make up a sum about spending **14s. 0d.**, and work it.

Exercise 10.—Measuring and its Application—Area.

- (1) Draw a **2-inch** square and a **3-inch** square. How many more square inches are there in the second square than in the first?
- (2) Draw a **4-inch** square. Cut out in coloured paper enough **2-inch** squares to cover the **4-inch** square.
- (3) From gummed paper cut out **2** squares, with each side **3** inches. Place them side by side. How many square inches are there in this figure?
- (4) With your tickets make an oblong **5** inches long and **3** inches broad.
- (5) Show how many square inches there are in an oblong **5** inches long and **4** inches broad.
- (6) Draw the following figure in your book :



Draw the **T-square** in coloured paper, and gum it on the big oblong.

- (7) How many square inches in the whole oblong?
- (8) Draw a line $3\frac{1}{2}$ inches long, and another $2\frac{1}{4}$ inches long. Draw another as long as both together.
- (9) Draw a line **3·4** inches long, and add another to it **1·5** inches long. How long is the line now?
- (10) Add together $3\frac{1}{2}$ inches, $2\frac{1}{4}$ inches, and $1\frac{1}{2}$ inches by drawing lines.
- (11) Take $4\frac{1}{2}$ inches from $5\frac{1}{4}$ inches by drawing lines.
- (12) Draw a line to show how you would share $7\frac{1}{2}$ inches of ribbon equally among **5** girls.
- (13) A line $1\frac{1}{2}$ inches long stands for **3** halfpence. How long would a line be which stands for **9d.**?

Exercise 11.—Measuring—Yards, Feet, and Inches.

- (1) How many feet are there in **89** yards of string?
 - (2) How many yards are there in **81** ft.? in **132** ft.? in **378** ft.? in **569** ft.?
 - (3) A joiner has **4** boards the following lengths: **15** feet, **19** feet, **17** feet, and **18** feet. How many yards long are all the boards put together?
 - (4) A board is **8** yd. **2** ft. long. How many feet is that?
 - (5) How many feet are there in **9** yards **2** feet of string?
 - (6) A door is **7** ft. **6** in. high, a cupboard is **4** ft. **9** in. high, and a table **2** ft. **6** in. high. How high are they altogether?
 - (7) How many yards are there in **265** feet? in **590** feet? in **745** feet?
 - (8) How many feet in **9** yd. **2** ft.? in **8** yd. **1** ft.?
 - (9) How many feet in **6** yd. **2** ft.? in **7** yd. **2** ft.?
 - (10) A table is **9** feet **4** inches long and **5** feet **9** inches wide. How far is it all round?
 - (11) A wheel goes **6** feet in going once round. How many times does it go round in going **744** feet?
 - (12) A man requires **5** ft. **6** in. of string to tie up a parcel. If he has only **4** ft. **10** in., how much is he short?
 - (13) If an inch stands for a foot, draw a line to represent **6** ft. **3** in.
 - (14) A wall is **164** feet long and **5** feet high. How many square feet are there in the wall?
 - (15) In a class-room there are **8** desks, each **6** ft. **6** in. long. How long are all the desks?
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- (16) **6** yards of cloth cost **14s. 3d.** What is the price per yard?
 - (17) Silk is **2s. 11½d.** per yard. What is the price of **3** yards?
(18) **18s. 5½d. — 14s. 9d.**
 - (19) What is the total cost of **4** yards of ribbon at **9½d.** per yard, and **5** yards of print at **11½d.** per yard?
 - (20) Make up a sum about measuring your exercise-book, and work it.

Exercise 12.—8 Times Table and Revision.

- (1) 83 marbles \times 5, 7, 8. (2) 94 marbles \times 6, 7, 8.
(3) 98×8 ; 59×8 ; 69×8 ; 76×8 ; 48×8 ; 79×8 .
(4) $368 \div 8$; $144 \div 8$; $376 \div 8$; $336 \div 7$; $468 \div 8$.
(5) 2s. 4d. \times 8; 1s. 9d. \times 8; 2s. 5d. \times 8; 1s. 7d. \times 8.
(6) 2s. 3d. \times 8; 2s. 5d. \times 8; 1s. $9\frac{1}{2}$ d. \times 8; 2s. $10\frac{1}{2}$ d. \times 6.
(7) 6s. 8d. \div 8; 5s. 4d. \div 8; 7s. 4d. \div 8; 18s. 8d. \div 8.
(8) At a show there are eight sheds, with 29 horses in each. How many horses are there altogether?
(9) At a certain railway station the following notice is posted eight times: 'Bradford Great Northern Railway Station.' How many letters are there on all the notices?
(10) There are 8 rows of celery in a garden, with 78 plants in a row. How many plants are there in all?
(11) Share 396 nuts equally among 8 boys.
(12) A farmer collected 248 eggs, 339 eggs, and 127 eggs from three farms, and put them into eight baskets of equal size. How many were there in each basket, and how many eggs were left over?
(13) A boy was paid 3s. 4d. for 8 hours' work. How much did he get per hour?
(14) A cistern holds 47 gallons of water. How many pints are there in it? (*8 pints make a gallon.*)
(15) At an egg show there were 46 plates of eggs, with six on each plate. A boy said there were 300 eggs on all the plates. How many was he wrong?
(16) There are 8 carriages in a train. Each carriage has 8 compartments, and each compartment holds 6 persons. How many persons will the train hold?
(17) In a load of turnips there are 582. The owner sells 118, and uses the remainder at the rate of 8 per day. How many days will they last?
(18) In a box there are 8 rolls of butter, which cost 1s. $2\frac{1}{2}$ d. per roll. The grocer sells the butter at 1s. 5d. per roll. How much profit does he make?
(19) Make up a sum about sharing marbles, and work it.

Exercise 13.—The Use of Signs and Brackets.

- (1) $7\frac{1}{2}\text{d.} + 1\text{s. } 9\frac{1}{4}\text{d.} + 1\text{s. } 6\frac{3}{4}\text{d.} + 3\text{s. } 8\frac{1}{2}\text{d.}$
 - (2) $1\text{s. } 4\frac{1}{2}\text{d.} + 2\text{s. } 7\frac{1}{2}\text{d.} + 2\text{s. } 8\frac{1}{4}\text{d.} + 3\text{s. } 9\frac{3}{4}\text{d.}$
 - (3) $(2\text{s. } 7\frac{1}{4}\text{d.} + 3\text{s. } 4\frac{1}{2}\text{d.}) - (1\text{s. } 3\frac{3}{4}\text{d.} + 2\text{s. } 7\frac{1}{2}\text{d.})$
 - (4) $(3\text{s. } 9\frac{1}{4}\text{d.} + 2\text{s. } 8\frac{3}{4}\text{d.}) - (2\text{s. } 5\frac{1}{2}\text{d.} + 2\text{s. } 8\frac{3}{4}\text{d.})$
 - (5) $(1\text{s. } 4\frac{1}{2}\text{d.} \times 5) + 12\text{s. } 9\text{d.}$
 - (6) $(2\text{s. } 4\frac{1}{2}\text{d.} \times 4) + 10\text{s. } 5\frac{1}{4}\text{d.}$
 - (7) $(2\text{s. } 9\frac{1}{2}\text{d.} \times 7) - 18\text{s. } 1\frac{1}{2}\text{d.}$
 - (8) $(2\text{s. } 7\frac{1}{2}\text{d.} \times 6) - 13\text{s. } 10\frac{1}{2}\text{d.}$
 - (9) $(10\text{s. } 4\text{d.} \div 4) + (13\text{s. } 9\text{d.} \div 3)$
 - (10) $(14\text{s. } 4\frac{1}{2}\text{d.} \div 5) + (14\text{s. } 9\text{d.} \div 6)$
 - (11) $\frac{13\text{s. } 9\text{d.}}{6} + \frac{15\text{s. } 2\text{d.}}{4}$
 - (12) $\frac{14\text{s. } 2\text{d.}}{5} + \frac{16\text{s. } 7\frac{1}{2}\text{d.}}{7}$
 - (13) $\frac{17\text{s. } 8\frac{1}{2}\text{d.}}{5} - \frac{11\text{s. } 5\text{d.}}{4}$
 - (14) $\frac{15\text{s. } 9\text{d.}}{6} - \frac{16\text{s. } 11\text{d.}}{7}$
 - (15) $39 + 48 + 74 + 105$
 - (16) $28 + 9 + 129 + 97$
 - (17) $(346 + 137) - (196 + 93)$
 - (18) $(295 + 147) - (129 + 19)$
 - (19) $(86 \times 6) + (64 \times 7)$
 - (20) $(97 \times 7) - (76 \times 8)$
 - (21) $(536 \div 4) + (645 \div 3)$
 - (22) $(686 \div 7) + (567 \div 3)$
 - (23) $(645 \div 5) - (584 \div 8)$
 - (24) $(444 \div 6) - (252 \div 7)$
 - (25) $(7\text{d.} \times 7) + (8\frac{1}{2}\text{d.} \times 6) + (10\frac{1}{2}\text{d.} \times 5)$
 - (26) $(8\frac{1}{2}\text{d.} \times 5) + (6\frac{1}{2}\text{d.} \times 7) + (9\frac{1}{2}\text{d.} \times 8)$
 - (27) $(9\frac{1}{2}\text{d.} \times 6) + (8\frac{1}{4}\text{d.} \times 4) - (11\frac{1}{2}\text{d.} \times 7)$
 - (28) $4\cdot8 \text{ in.} + 3\cdot4 \text{ in.} + 6\cdot7 \text{ in.}$
 - (29) $5\cdot7 \text{ in.} + 3\cdot8 \text{ in.} + 2\cdot9 \text{ in.}$
 - (30) $1\frac{1}{2} \text{ in.} + 1\frac{1}{4} \text{ in.} + 3\frac{3}{4} \text{ in.}$
 - (31) $2\frac{3}{4} \text{ in.} + 1\frac{1}{2} \text{ in.} + 2\frac{1}{4} \text{ in.}$
-
- (32) Find the total cost of 6 pairs of gloves at 1s. $11\frac{1}{2}\text{d.}$ per pair, and a cap at 1s. $9\frac{1}{2}\text{d.}$
 - (33) A builder needed 800 bricks. He had 437 in his yard and 98 in a cart. How many more must he get?
 - (34) On a tramcar there are 7 bundles of newspapers with 39 in each. How many papers are there in all?
 - (35) John has 49 marbles, and Tom has twice as many. How many have they between them?
 - (36) What is the eighth part of 312 plums?
 - (37) Make up a sharing sum, and work it.

Exercise 14.—Measuring—Distances and Areas.

- (1) How far was it round the oblong of the label before the corners were cut off?
- (2) Measure the back of your exercise-book. Put down the length and breadth. How far is it round?
- (3) How far is it round **6** such books?
- (4) How far is it round the book when it is open?
- (5) Measure the distance round your reading-book. How far is it round **5** such books?
- (6) The class-room is **24** feet long and **22** feet wide. What is the distance round the room?
- (7) How far is it round **6** class-rooms of the same size?
- (8) The playground is **30** yards long and **19** yards wide. A boy goes five times round it. How far has he gone?
- (9) A field is **45** yards long and **35** yards broad. How long is the fence round it?
- (10) A class-room is **4** yards high and **8** yards long. How many square yards are there in the two sides?
- (11) The same room is **6** yards wide. How many square yards in the two ends?
- (12) One side of a square field is **45** yards. A boy walks twice round it. How many yards has he walked?
- (13) Along a railway side there is a footpath **455** feet long. It is protected on one side by rails **7** feet long. How many rails are there?
- (14) The causeway in front of a house is **25** feet long and **7** feet wide. How many square feet are there in it?
- (15) Four flags are flying on the Town Hall. If each flag is **7** yards long and **4** yards wide, how many square yards are there in all the flags?
- (16) There are **6** doors in the school. Each door is **7** feet high and **3** feet broad. How many square feet are there in all the doors?
- (17) One side of a square flower-plot measures **8** feet. How many square feet are there in the plot?
- (18) Write down a 'times' sum, and work it.

Exercise 15.—Miscellaneous Exercises.

- (1) Draw two squares, one with 4-inch sides, and the other with 5-inch sides.
- (2) Draw a line as long as your little finger, and another as long as your longest finger. How long are they together?
- (3) A reading-book is 7 inches long. If 48 such books are placed end to end, how many inches long do they measure?
- (4) A boy saved 15s. 0d. in order to begin poultry-keeping. He spent 1s. 8d. each on 5 hens, 5s. 6d. on a small hen-house, and the rest on food. How much did the food cost him?
- (5) Half a stone of flour costs $7\frac{1}{2}$ d. How much short of 10s. 0d. will 7 stones cost?
- (6) What is the difference between 6 times round 6 exercise-books, and 6 times round 6 reading-books?
- (7) A youth works 6 days a week, and is paid 2s. 9d. per day. How much does he earn in a week?
- (8) A school lobby is 14 yards long and 5 yards wide. How many square yards are there in it?
- (9) 7 boys and a man go on a trip to the seaside. All their fares amount to 15s. 9d. The man's fare is 3s. 6d. What is the fare for each boy?
- (10) Jane has a half-sovereign, half-a-crown, and 2 florins in her purse. She pays 5s. 6d. for rent, and 2s. $8\frac{1}{2}$ d. to the butcher. How much has she then?
- (11) In a boy's money-box are a five-shilling piece, half-a-crown, 3 sixpences, and 3 threepenny-bits. If his uncle gives him a florin, and his father 1s. $4\frac{1}{2}$ d., how much will he have then?
- (12) In five stones of apples there were 234 apples. A man took out 125, and threw a bad one away. He shared the others equally among six boys. How many did each get? (13) $1\text{s. } 8\frac{1}{2}\text{d.} \times 3$.
- (14) If 12s. were divided equally among 4 men and 4 women, how much would each get?
- (15) What sum is 5 times as large as 3s. $10\frac{1}{2}$ d.?

Exercise 16.—Term Tests.

A.

- (1) (a) Draw a line **3.3** inches long, and one twice as long.
(b) Draw an oblong to show the space covered by **6** rows of inch-tickets, with **4** tickets in a row.
(c) Draw a square **2** inches each side. Then make an oblong twice the size.
- (2) A girl has **5** yards of tape. A yard is **36** inches. If she cuts it up into **6**-inch lengths, how many pieces will there be?
- (3) A man had **15s. 0d.** He bought **5** hens at **2s. 8d.** each. How much had he then?
- (4) A boy lives **76** yards from school. How many yards will he walk in **2** days in going backwards and forwards to school, if he goes home to dinner each day?
- (5) A girl worked **6** days, and earned **17s. 0d.** How much was that for each day?

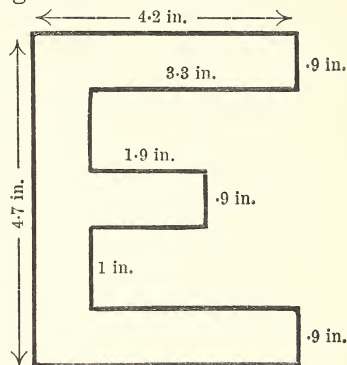
B.

- (1) (a) Show **3** inches square and **3** square inches.
(b) A man has to walk **$8\frac{1}{2}$** miles. Draw a line to show how far he has to go when he has walked **$5\frac{3}{4}$** miles. (*Note.—Let 1 inch = 1 mile.*)
(c) Draw a figure to show **8** square inches.
- (2) In a shop there are **5** bats, marked **2s. $11\frac{1}{2}$ d.** each. How much is that for them all?
- (3) A man had **8s. $9\frac{1}{2}$ d.**, and he sold his dog for **7s. 6d.** He then bought a pair of boots for **9s. $11\frac{1}{2}$ d.** How much had he then?
- (4) A schoolyard is **25** yards long and **18** yards wide. A boy runs **7** times round it. How many yards has he gone?
- (5) A butcher bought **8** pounds of meat at **$9\frac{1}{2}$ d.** per pound, and sold the whole for **7s. 0d.** How much did he gain per pound?

Term Tests—continued.

C.

- (1) (a) Draw a line $2\frac{3}{4}$ inches, and another $3\frac{1}{4}$ inches.
Draw another as long as both of them.



- (b) Draw the letter **E**
the size marked
on the drawing.
- (c) Draw an oblong to
show **12** square
inches.
- (2) A boy earns **2s. 9d.** per week, and his sister **1s. 6d.**
How much do they earn together in **4** weeks?
- (3) I buy **369** eggs from one farm, and **268** from another.
Seven grocers buy all the eggs, and each takes the
same number. How many does each buy?
- (4) In a lead-pencil box are **27** pencils. If the teacher
puts in **6** dozen, how many are there altogether?
- (5) Mother goes shopping, and spends **2s. 9½d.** on flour,
3s. 9d. on meat, **1s. 4½d.** on butter, and **1s. 6½d.** on
tea. How much does she spend?

D.

- (1) (a) Draw a line **3.2** inches long, and another **4.4** inches
long. Draw another line as long as both these.
- (b) Draw a square, with each side $3\frac{3}{4}$ inches.
- (c) Find the number of inches round an oblong **14**
inches long and **13** inches broad.
- (2) A boy bought **8** books at **1s. 7½d.** each, and had **2s. 9d.**
left. How much had he at first?
- (3) A man had **1s. 8½d.** in his purse, and he sold **8** rabbits
at **1s. 9d.** each. How much had he then?
- (4) A gentleman shared **4** sixpences, **5** shillings, **2** two-
shilling pieces, **2** half-crowns, and **18** pennies equally
among **7** boys. How much did one boy get?
- (5) Thirty-six inches make a yard. How many inches
are there in eight yards?

Exercise 17.—Numeration not exceeding 999.

- (1) Add together, both downwards and crossways :

	(a)	(b)	(c)	(d)	(e)
(f)	306	108	295	127	142
(g)	194	119	58	68	187
(h)	75	274	197	195	195
(i)	149	41	345	266	186
(j)	37	36	87	84	129

- (2) From Bradford to London is **182** miles. If a cyclist goes **67** miles one day, and **76** the next, how far will he have to go to complete the journey ?
- (3) A box of eggs contains **560**. **195** are sold on Monday, and an equal number on each of the five following days. How many were sold on each of these days ?
- (4) A farmer has **484** sheep, and his neighbour has **37** less. How many sheep have they together ?
- (5) A book-case had **6** shelves. If there were **47** books on each of **5** shelves, and **56** on the other, how many books were there in the book-case ?
- (6) There are **553** bricks in a load. A man can carry **7** bricks in **1** pile. How many piles would he carry before he had taken away the load ?
-
- (7) What would be left out of **15s. 0d.** after buying **6** stones of flour at **1s. 4½d.** per stone ?
- (8) A sack of flour costs **25** shillings. How many shillings will **7** sacks cost ?
- (9) In a shop there are **6** square tables having each side **4** feet long. How many square feet do the tops of the tables measure altogether ?
- (10) Oranges are **2** for **1½d.** If an inch stands for **1d.**, draw a line to show how many oranges I can get for **9d.**
- (11) I buy **4** pounds of cheese at **9d.** per pound, and **3** pounds of butter at **1s. 5d.** per pound. How much do I spend ?
- (12) Divide **18** shillings equally among **4** men and **4** women.
- (13) **16s. 10½d. ÷ 6.** (14) **17s. 1d. - 8s. 10½d.**
- (15) How many sixes are there in the sum of **89, 78, and 7** ?
- (16) Write a sum about books, and work it.

Exercise 18.—Angles.

- (1) Draw lines to stand for the wood round the panes in the window.
 - (2) Count the number of angles in the window-frame, and write down their names.
 - (3) Draw a horizontal line, and then draw another line to make a square angle with it. What kind of line is this one?
 - (4) Draw a horizontal line 4·4 inches long, and at each end draw a vertical line 3·6 inches long. Find the middle of the horizontal line, and draw another vertical line 3·6 inches long. How many angles have you made?
 - (5) Draw a horizontal line $3\frac{3}{4}$ inches long. Measure off $1\frac{1}{2}$ inches, and make a dot. From the dot draw a sloping line. How many angles are there? What are their names?
 - (6) With your sticks make a blunt angle, and draw it.
 - (7) Make a sharp angle with your sticks, and draw it.
 - (8) Draw the hands of a clock, showing nine o'clock. What kind of angle do they make?
 - (9) Draw the hands of a clock, showing other square angles.
 - (10) Draw the hands of a clock, showing ten o'clock. What kind of angle do they make?
 - (11) Lay two rulers across each other in a slanting position, and write down the names of all the angles you make.
 - (12) Draw the corner of your street, and write the name of the angle.
-
- (13) What is the total cost of the following: 4 pounds of sugar at $2\frac{1}{2}$ d. per pound; $1\frac{1}{2}$ pounds of tea at 1s. 8d. per pound; 2 pounds of butter at 1s. $2\frac{1}{2}$ d. per pound; 3 pounds of coffee at 1s. 6d. per pound?
 - (14) A bag contains 252 nuts. If half of them are shared equally among 6 girls, how many does each get?
 - (15) How many half-dozens are there in a box containing five hundred and sixteen eggs?
 - (16) Share 17s. 2d. equally among 5 boys.

Exercise 19.—9 Times Table—with Revision.

- (1) Books are tied up in parcels of **9**. How many books are there in **59** such parcels?
- (2) In a box there are **540** oranges. If they are sold at **9** for a shilling, how many shillings are they worth?
- (3) A man works **9** hours a day. If it takes him **729** hours to make a machine, how many days does he work at it?
- (4) Carrots are sold in bundles of **9**. How many bundles can be made from **649** carrots?
- (5) A box of eggs contains **58** rows, with **9** eggs in a row. How many eggs are there in the box?
- (6) Add together **9** times **67** yards and **7** times **39** yards.
- (7) Take **6** times **57** books from **9** times **48** books.
- (8) **48** books cost **7d.** each, and **29** cost **9d.** each. How many pennies does one lot cost more than the other?
- (9) What will **9** pairs of socks cost at **1s. 9½d.** per pair?
- (10) How much more is **7** pounds of tea at **2s. 8½d.** per pound than **9** pounds of coffee at **1s. 10½d.** per pound?
- (11) A boy has **3s. 6d.** at home. He sells **7** rabbits at **1s. 3½d.** each. How much money has he then?
- (12) There are **259** boys in a school. If they march **8** in a row, how many rows of boys are there?
- (13) A boy sells **39** evening papers every night. How many will he sell in **6** nights?
- (14) There are **37** trucks in a train. If each truck holds **9** tons of coal, how many tons are carried?
- (15) A sheet of drawing-paper is **11** inches long and **9** inches wide. How many square inches are there in **8** sheets?
- (16) Best flour is **1s. 10d.** per stone. If there are **16** stones in a sack, what will half a sack cost?
- (17) In one box there were **72** eggs, and in another **60**. If **16** eggs were taken out of each box, how many eggs would be left in the two boxes?
- (18) Take a third of **17s. 9d.** from **19s.**
- (19) Make up a sum about flour, butter, and eggs, and work it.

Exercise 20.—Measuring—Halves, Quarters, and Eighths.

- (1) Draw a line $4\frac{1}{2}$ inches long. Divide it into half-inches. Write the length of the whole line in half-inches.
- (2) Add together $1\frac{1}{2}$ shillings, $3\frac{1}{4}$ shillings, and $4\frac{3}{4}$ shillings. Draw a line to stand for the answer, if 1 inch equals 1 shilling.
- (3) A piece of paper is 8 inches long and 6 inches broad. If it is folded into halves, and then folded again into halves, how much space will the folded paper then cover?
- (4) A grocer has a chest of tea weighing 56 pounds. He weighs it up into quarter-pound packets. How many packets has he?
- (5) A man has a ball of string 512 yards long. He shares it equally among 8 boys. Each boy divides his share into 8 equal parts. How long is each of these parts?
- (6) A farmer has 17s. 6d. He gives each of his 4 sons a quarter of it. How much does each son get?
- (7) A man has to travel 168 miles. He goes half the way by train, a quarter of it in a motor-car, and the rest in a trap. How far does he go in the trap?
- (8) Some fishermen caught 344 pounds of fish in a net, but one-eighth of the weight was thrown back into the sea. How many pounds of fish were kept in the boat?

- (9) A man buys 15 books. 6 of these cost 1s. $9\frac{1}{2}$ d. each, and the rest $10\frac{1}{2}$ d. each. How much did all the books cost?
- (10) A road is 896 feet long. Gas-pipes 8 feet long are laid the whole length. How many pipes are needed?
- (11) At Christmas a man shared 16s. 6d. equally among 6 poor women. How much did each get?
- (12) 2 sacks of flour weigh 420 pounds each. How many 7-pound bags can be filled out of them?
- (13) On a wagon were 27 barrels of apples. If each barrel contained 9 stones, how many stones of apples were there on the wagon?

Exercise 21.—Weight.

- (1) Add together 1 lb. 4 oz., 2 lb. 6 oz., and 3 lb. 4 oz.
- (2) A boy goes to the shop and buys 2 lb. 4 oz. of cheese, 1 lb. 8 oz. of tea, 4 lb. of sugar, and 8 oz. of bacon. What weight has he to carry?
- (3) How many ounces are there in 4 lb. of sugar?
- (4) Mother bought $3\frac{1}{2}$ lb. of butter, and made it into little rolls, each weighing one ounce. How many rolls did she make?
- (5) A boy went to the shop for 4 lb. of sugar. He burst the bag, and lost 12 ounces. How much had he then?
- (6) 14 lb. make a stone. A boy took his cart for 4 stones of flour. How many pounds had he?
- (7) How many 4-ounce packets of cocoa can be made out of 4 lb.?
- (8) A book weighs 1 lb. 10 oz., and another weighs 2 lb. 12 oz. What do they weigh together?
- (9) (a) $4\frac{1}{2}$ lb. + $2\frac{3}{4}$ lb. + $1\frac{3}{4}$ lb.; (b) $3\frac{3}{4}$ lb. + $1\frac{1}{4}$ lb. + $2\frac{3}{8}$ lb.
- (10) A ham weighing 8 lb. cost 7s. 8d. How much was it per lb.?
- (11) 3 pennies weigh one ounce. How many pennies weigh 6 pounds?
- (12) One chicken weighs 5 lb. 10 oz., and another weighs 4 lb. 8 oz. What is the difference in their weights?
- (13) What is the total cost of the following: 2 lb. of tea at 2s. 8d. per lb., 5 lb. of sugar at $2\frac{1}{2}$ d. per lb., and 3 lb. of lard at $6\frac{1}{2}$ d. per lb.?
- (14) What weight is 9 times as large as 97 lb.?
- (15) Half a sack of flour weighs 8 stones. How many pounds does a sack weigh? (14 lb. = 1 stone.)
- (16) How many 7-lb. bags of sugar can be filled from 149 lb.?
- (17) A pork-pie weighs 1 lb. 6 oz. What is the weight of 4 such pies?
- (18) Make up a sum about 4 lb. of sugar, and work it.

Exercise 22.—Addition of Money.

(1) Add both vertically and horizontally the following:—

	(a)		(b)		(c)		(d)	
	s.	d.	s.	d.	s.	d.	s.	d.
(e)	10	9 $\frac{1}{2}$	13	4 $\frac{1}{2}$	15	6 $\frac{1}{2}$	9	9 $\frac{1}{2}$
(f)	8	9 $\frac{1}{2}$	6	7 $\frac{1}{2}$	12	8 $\frac{3}{4}$	14	10 $\frac{1}{2}$
(g)	16	8 $\frac{1}{4}$	13	9 $\frac{3}{4}$	15	4 $\frac{1}{2}$	18	7 $\frac{3}{4}$
(h)	12	7 $\frac{3}{4}$	15	8 $\frac{1}{2}$	9	7 $\frac{1}{4}$	16	4 $\frac{1}{2}$

- (2) A baker bought flour for 19s. 6d., butter for 5s. 8d., lard for 3s. 9 $\frac{1}{2}$ d., and currants for 1s. 7d. How much money did he spend?
- (3) How much will the following cost altogether: 4 lb. of beef at 9 $\frac{1}{2}$ d. per lb., 3 lb. of mutton at 8 $\frac{1}{2}$ d. per lb., 4 lb. of pork at 10d. per lb.?
- (4) A boy earned 5s. 9 $\frac{1}{2}$ d., a girl 4s. 7 $\frac{1}{2}$ d., and a man £1, 6s. 8d. How much did they earn in all?
- (5) A fish-dealer paid the following bill: Salmon, 14s. 5 $\frac{1}{2}$ d.; cod, 7s. 8d.; soles, 12s. 7 $\frac{1}{2}$ d. How much was the total amount?
- (6) A pair of boots cost 11s. 6d., a hat 4s. 11 $\frac{1}{2}$ d., and an overcoat £1, 1s. 9d. Find the total cost.
- (7) A tram-conductor started with 4s. 9 $\frac{1}{2}$ d. He took 18s. 10 $\frac{1}{2}$ d. in the morning, and 14s. 4 $\frac{1}{2}$ d. in the afternoon. How much had he then?
- (8) A chair cost 9s. 4d., a table 13s. 8d., a fender 12s. 9d., and a stand 7s. 9 $\frac{1}{2}$ d. Find the total cost.
- (9) A woman paid 3s. 9 $\frac{1}{2}$ d. for an ox-tongue, 5s. 9 $\frac{1}{2}$ d. for beef, 6s. 10 $\frac{1}{2}$ d. for mutton, and 7s. 4d. for pork. How much was her bill?
- (10) What is the total amount paid for the following: Calico, 7s. 10 $\frac{1}{2}$ d.; flannel, 9s. 4 $\frac{1}{2}$ d.; print, 6s. 8 $\frac{1}{2}$ d.; and linen, 5s. 7d.?
- (11) A boy saved 6s. 8d. His mother gave him 2 half-crowns, and his father gave him two florins and three sixpences. How much had he then?
- (12) Make up a sum about spending £1, 0s. 0d., and work it.

Exercise 23.—Subtraction of Money.

- (1) (a) 18s. $4\frac{1}{2}$ d. — 13s. $9\frac{1}{2}$ d.; (b) 16s. $6\frac{1}{2}$ d. — 8s. $7\frac{3}{4}$ d.
(2) (a) £1, 0s. 0d. — 13s. $4\frac{1}{2}$ d.; (b) 17s. $4\frac{1}{2}$ d. — 5s. 9d.
(3) (a) £1, 5s. 6d. — 18s. $9\frac{1}{4}$ d.; (b) 17s. $3\frac{1}{4}$ d. — 10s. $4\frac{3}{4}$ d.
(4) (a) £1, 10s. 8d. — 14s. $8\frac{1}{2}$ d.; (b) 13s. $3\frac{1}{2}$ d. — 12s. $9\frac{3}{4}$ d.
(5) A woman had 2 half-sovereigns. She bought a hat for 17s. $11\frac{1}{2}$ d. How much had she then?
(6) Tom had 16s. $8\frac{1}{2}$ d. in the bank, and his sister had 1s. 9d. less. How much had she?
(7) A woman took £1, 10s. 0d. to buy groceries. She spent 19s. $8\frac{1}{2}$ d. How much had she then?
(8) John went to the seaside with a guinea. He spent 16s. $10\frac{1}{2}$ d. How much had he left?
(9) A man handed to the clerk 2 half-sovereigns for his fare to London. If the fare was 15s. $8\frac{1}{2}$ d., how much change did he get?
(10) In a purse were half-a-sovereign, 2 crowns, 3 half-crowns, and 3 sixpences. If 19s. $7\frac{1}{2}$ d. was spent on clothing, how much was left?
(11) A woman required £1, 5s. 0d. to buy a jacket. She had only 18s. $8\frac{1}{2}$ d. How much was she short?
(12) A man handed 2 half-sovereigns to the grocer, and he got 6s. $5\frac{1}{2}$ d. change. How much had he spent?
(13) A suit cost £1, 12s. 8d., and a pair of boots 15s. 9d. How much did the suit cost more than the boots?
(14) A man takes £2, 0s. 0d. to buy his three sons some boots. The youngest boy's boots cost 7s. 9d., the next 8s. 11d., and the eldest boy's 12s. 8d. How much money has he left?

(15) A book-case has 6 shelves with 48 books on a shelf, and another has 9 shelves with 37 books on a shelf. How many more books are there in one book-case than in the other?
(16) Draw a figure to show the difference between 4 square inches and 4 inches square.
(17) What number is 69 more than 144?
(18) Make up a sum about spending a guinea, and work it.

Exercise 24.—Multiplication of Money.

- (1) Multiply 15s. 6½d. by (a) 5, (b) 6, (c) 4.
 - (2) Multiply 11s. 9¼d. by (a) 7, (b) 8, (c) 3.
 - (3) Multiply 16s. 8¾d. by (a) 4, (b) 6, (c) 5.
 - (4) The fare from Bradford to Glasgow is 17s. 3½d. What will be the total fares for father, mother, and three friends?
 - (5) Silk is 8s. 9d. per yard. What will 9 yards cost?
 - (6) A draper sold 6 yards of silk at 6s. 9½d. per yard. How much did he receive?
 - (7) Find the cost of 9 yards of cloth at 7s. 10½d. a yard.
 - (8) The rent of a house is 5s. 9d. per week. How much is paid in 8 weeks?
 - (9) A farmer had 4s. 9d. in his pocket. He sold 5 geese at 7s. 8d. each. How much had he then?
 - (10) A couple of ducks cost 5s. 6d., and a chicken 2s. 8½d. What would 4 of each cost?
 - (11) A man bought 6 bottles of Bovril for £1, 10s. 0d., and sold each bottle for 6s. 9½d. How much did he gain?
 - (12) A man had 15s. 0d. He bought 5 hens at 2s. 9d. each. How much had he left?
 - (13) A girl set out with 3s. 9d. in her purse. She sold 6 dozen buns at 9d. a dozen. How much had she then?
 - (14) A man had 6 golf-clubs in his bag. The bag cost 8s. 4d., and the clubs 5s. 6d. each. What was the total cost?
 - (15) A woman had £2, 0s. 0d. She bought 5 pairs of boots at 6s. 11½d. per pair. How much had she then?
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- (16) A table is 9 feet long and 7 feet wide. How far is it round 7 such tables?
 - (17) A joiner has in a pile 21 boards, each 8 feet long. How many feet are there in 5 such piles of boards?
 - (18) From the greatest of these three numbers take the least: 76, 102, 130.
 - (19) Make up a sum about selling apples at 3s. 8d. per stone, and work it.

Exercise 25.—Division of Money.

- (1) Divide 17s. 4d. by (a) 4, (b) 8.
 - (2) Divide 15s. 3 $\frac{3}{4}$ d. by 7. (3) Divide £1, 15s. 1 $\frac{1}{2}$ d. by 6.
 - (4) Divide £1, 6s. 4d. by 8. (5) Divide £1, 5s. 6d. by 9.
 - (6) Five men paid altogether £1, 13s. 6 $\frac{1}{2}$ d. for railway fares. What was the fare for one man?
 - (7) A man bought 9 lb. of bacon for 7s. 10 $\frac{1}{2}$ d. How much was the bacon per lb.?
 - (8) 7 men paid altogether £1, 1s. 7d. for railway fares from Bradford to Bury. How much was this each?
 - (9) 9 men hire a wagonette for the day. If it costs them £1, 10s. 9d, how much should each person pay?
 - (10) In a barrel are 9 stones of apples. If the whole cost £1, 3s. 7 $\frac{1}{2}$ d., how much was that for one stone?
 - (11) Share equally a sovereign, half-a-sovereign, half-a-crown, and a florin among 9 poor women.
 - (12) Four tables of equal value cost £2, 6s. 10d. What was the price of one?
 - (13) 7 boys shared £2, 0s. 4 $\frac{3}{4}$ d. equally among them. How much did each boy get?
 - (14) A man spent 13s. 8d. out of £2, 0s. 0d., and then shared the remainder equally among 8 boys. How much did each boy get? (15) £1, 3s. 9d. \div 6.
 - (16) A woman paid 2 half-sovereigns, 2 half-crowns, 3 florins, and a halfpenny for 5 table-cloths of equal value. What was the price of each?
 - (17) I shared £3 equally among 7 boys as far as I could. How much could I not share?
-
- (18) $(58 + 29) - (783 \div 9)$.
 - (19) A farmer exchanged 5 geese at 6s. 9d. each for 9 hens. How much was each hen worth?
 - (20) A corn-dealer had 424 sacks of wheat. He sold 198 sacks, and bought 378. How many had he then?
 - (21) Make up a sum about sharing money, and work it.

Exercise 26.—Graphic Arithmetic.

- (1) Draw a line $1\frac{1}{2}$ inches long. Draw another $1\frac{3}{4}$ inches longer. How long are they together?
 - (2) Draw a line $2\frac{1}{4}$ inches long. Lengthen it so as to measure 6 inches. How much has been added?
 - (3) If an inch stands for 3d., draw a line to stand for $4\frac{1}{2}$ d.
 - (4) If an inch stands for 6d., draw a line to stand for 1s. 9d.
 - (5) By drawing a line show how many $\frac{3}{4}$ d. there are in 6d.
 - (6) Find by means of your ruler how much must be added to $2\frac{1}{2}$ d. to make 7d.
 - (7) If $\frac{1}{4}$ inch stands for 1 oz., draw a line to stand for 1 lb.
 - (8) A man has to walk $8\frac{1}{2}$ miles. Show by a line how far he has to go when he has gone $3\frac{3}{4}$ miles.
 - (9) Draw a line AB $5\frac{1}{2}$ inches long. On AB make a point C $2\frac{3}{4}$ inches from A. How far is it from C to B?
 - (10) If $\frac{1}{2}$ inch stands for 3d., draw a line to stand for 1s. 6d.
 - (11) Draw a line to show how many pieces of paper $1\frac{1}{4}$ inches long can be cut from a piece 5 inches long.
 - (12) If $\frac{1}{4}$ inch stands for 2 oz., draw a line to show how many 2-oz. packets can be made from 1 lb.
 - (13) Draw a figure to show how many fours there are in 24.
 - (14) If $\frac{1}{10}$ inch stands for $\frac{1}{2}$ d., draw a line to stand for 1s. 8d.
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- (15) Find the cost of 5 hats at 3s. $10\frac{1}{2}$ d. each.
 - (16) 6 pairs of socks cost 10s. 6d. Find the price per pair.
 - (17) A woman had 2 half-crowns and 2 florins in her purse. She bought 5 pounds of bacon at $10\frac{1}{2}$ d. per pound, and 4 pounds of cheese at $7\frac{1}{2}$ d. per pound. How much had she left?
 - (18) $(11d. \times 8) + (7\frac{1}{2}d. \times 6) - (7\frac{3}{4}d. \times 5)$.
 - (19) (a) $5\cdot4$ in. + $6\cdot3$ in. + $2\cdot8$ in.; (b) $3\frac{3}{4}$ in. + $2\frac{1}{2}$ in. + $1\frac{1}{8}$ in.
 - (20) Make up a sum about the area of your table, and work it.

Exercise 27.—Use of Signs and Brackets.

- (1) 69 tickets + 87 tickets + 398 tickets + 276 tickets.
- (2) (39 tickets \times 6) + (57 tickets \times 5).
- (3) (47 eggs \times 7) + (64 eggs \times 9).
- (4) (58 books \times 8) + (36 books \times 4).
- (5) (462 tickets \div 6) - (462 tickets \div 7).
- (6) (459 oranges \div 9) + (464 oranges \div 8).
- (7) 267 tickets + 498 tickets - 689 tickets.
- (8) (6s. $9\frac{1}{2}$ d. \times 5) + (4s. $9\frac{1}{2}$ d. \times 4).
- (9) (8s. $9\frac{1}{4}$ d. \times 3) + (5s. $6\frac{1}{2}$ d. \times 6).
- (10) (6s. $7\frac{1}{2}$ d. \times 7) - (4s. $6\frac{1}{4}$ d. \times 4).
- (11) (8s. $4\frac{1}{4}$ d. \times 7) - (5s. $7\frac{1}{2}$ d. \times 8).
- (12) (16s. 4d. \div 7) + (19s. 9d. \div 6).
- (13) (£1, 18s. 9d. \div 5) + (£1, 8s. $10\frac{1}{2}$ d. \div 9).
- (14) (£1, 6s. 8d. \div 4) + (£1, 10s. $7\frac{1}{2}$ d. \div 3).
- (15) (£2, 4s. 8d. \div 8) - (£1, 18s. 6d. \div 7).
- (16) (£1, 4s. $4\frac{1}{2}$ d. \times 4) - (16s. 3d. \times 6).
- (17) (12s. $9\frac{1}{2}$ d. \times 6) - (£1, 17s. $8\frac{1}{2}$ d. \div 5).
- (18) What will be the total cost of 4 yards of silk at 5s. 8d. per yard, and 6 hats at 7s. 9d. each?
- (19) In a box there are 872 eggs. A man sells them at 8 for a shilling. How many shillings does he get? How many is that less than eight hundred and forty?
- (20) A field is 87 yards long and 76 yards wide. What is the distance round the field?
- (21) I bought 6 hens and a cote for £1, 18s. 6d. The hens cost 3s. $6\frac{1}{2}$ d. each. What did the cote cost?
- (22) Make a sum about 7 ducks being bought and then sold, and work it.
- (23) If geese are 6s. 9d. each, and hens are 2s. $9\frac{1}{2}$ d. each, what must I give for 9 of each?
- (24) A man had 18s. 0d. He bought 5 hens at 2s. 9d. each. How much had he then?
- (25) How much change out of £1 will a man have after buying a hat for 6s. 6d., a tie for 1s. 1d., and 6 collars for 3s. 9d.?
- (26) £1, 14s. 9d. \div 6.

Exercise 28.—Measuring and Areas.

- (1) Measure the chalk-box and find (a) how far it is round the end; (b) how far it is round both ends; (c) how far it is round both sides; (d) how far it is round top and bottom.
 - (2) If the chalk-box is **4** inches high and **4** inches broad, what is the total area of the two ends?
 - (3) If the same box is **6** inches long, what is the total area of the two sides?
 - (4) What is the total area of the top and bottom of the box?
 - (5) If the box were covered with paper, how many square inches of paper would be needed?
 - (6) A wooden box is **6** inches high, **8** inches broad, and **10** inches long. (a) How many square inches are there in the two ends? (b) How many square inches in the two sides? (c) How many square inches in the top and bottom together?
 - (7) A class-room is **5** yards high and **8** yards long. How many square yards are there in the two sides?
 - (8) The same room is **7** yards wide. How many square yards are there in the two ends?
 - (9) How many square yards are there in all the walls of the room?
 - (10) In a school are **6** class-rooms. Each room is **9** yards long and **7** yards broad. How many square yards are there in the floors of all the rooms?
 - (11) In a park there are **3** paths. Each path is **25** yards long and **5** yards broad. How many square yards are there in all the paths?
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- (12) A shoemaker owes **15s. 8d.** to a grocer. If he sells the grocer **2** pairs of boots worth **17s. 8d.** per pair, how much will the grocer have to pay?
 - (13) **7** footballs are marked **3s. 9d.** each. How much are they worth in all? (14) Take **18** from **207**.
 - (15) Make up a sum about a boy spending **15s. 0d.** at the shop, and work it. (16) **8 + 253 + 73 + 69 + 179**.

Exercise 29.—10 Times Table.

- (1) Ten books contain 68 pages each. How many pages are there in all the books?
 - (2) If a flock of 780 sheep were divided into 10 equal lots, how many would there be in each lot?
 - (3) A train is made up of 8 carriages, and each carriage of 8 compartments. If each compartment holds 10 persons, how many persons does the train hold?
 - (4) A hall holds 680 persons. It has seats to hold 10 people each. How many seats are there in the hall?
 - (5) A gardener plants 10 cabbages in a row, and he has 645 cabbage-plants. How many rows does he plant?
 - (6) A railway truck holds 10 tons of coal. If a goods engine pulls 24 full trucks, how many tons of coal does it pull?
 - (7) Share 17s. 1d. equally among 10 men.
 - (8) A greengrocer buys 10 barrels of apples at 5s. 8½d. per barrel. How much do all the barrels cost him?
 - (9) A man bought 11 books for 13s. 1½d. One of them cost 2s. 8½d.; the rest were equal in price. How much did each of them cost?
 - (10) 10 boys collected 17s. 11d. for the Lifeboat Fund. How much is that each, taking one with another?
 - (11) There are 480 oranges in each of two boxes. If the oranges are sold at 10 for a penny, how many pennies are they worth?
 - (12) Ten times a certain sum of money is £1, 5s. What is the sum? (13) £1, 13s. 10d. ÷ 10.
 - (14) There are six foot-rulers on the desk. How many tenths of an inch are there in all the rulers?
 - (15) Christmas-cards are 10 for a penny. If a man has received 65 pennies for cards, how many has he sold?
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- (16) I earn 17s. 6d. a week; my brother earns half as much. How much do we earn together?
 - (17) What must be added to 379 to make five hundred?
 - (18) Write down a sum about a man selling pigs, and work it.

Exercise 30.—Simple Money Calculations.

- (1) What is the total cost of 3 dozen books at 4d. each, and 2 dozen at 6d. each?
- (2) What will be the total cost of the following: 2 dozen eggs at 8 for 1s. 0d.; 2 lb. of butter at 1s. 5d. per lb.; 3 dozen cakes at 3d. each?
- (3) Oranges are 8 for 1s. 0d. How many shillings will 480 oranges cost?
- (4) What will be the total cost of 3 dozen buttons at 1d. each; 3 dozen yards of ribbon at $1\frac{1}{2}$ d. per yard; 4 dozen reels of cotton at 3d. each?
- (5) A woman buys the following: 12 lb. of soap at 5d. per lb.; 24 lb. of soda at $1\frac{1}{2}$ d. per lb.; 24 oz. of tea at 2d. per oz. What do they cost in all?
- (6) A man buys 2 boxes of oranges, each containing 486. He sells them at 9 for 6d. How much money does he get for them?
- (7) What will the following cost in all: $1\frac{1}{2}$ dozen handkerchiefs at 3d. each; 3 dozen ties at 4d. each; 2 dozen collars at 6d. each?
- (8) What will the following cost in all: $\frac{1}{2}$ -dozen plates at 9d. each; $\frac{3}{4}$ -dozen cups at 6d. each; $\frac{3}{4}$ -dozen saucers at 4d. each?
- (9) How much would a grocer pay in all for the following: 12 jars of jam at $4\frac{1}{2}$ d. each; 2 dozen boxes of starch at 5d. a box; 12 dozen boxes of matches at $1\frac{1}{2}$ d. per dozen?
- (10) How much will all the following stamps cost: 4 dozen stamps at $1\frac{1}{2}$ d. each; 3 dozen stamps at $\frac{1}{2}$ d. each; 2 dozen stamps at 3d. each?
- (11) How much change out of £1, 0s. 0d. is there after buying 3 dozen yards of calico at 5d. per yard?
- (12) A hawker had 1s. 6d. He sold 8 dozen knots of tape at 1d. each. How much money had he then?
- (13) What must be added to the sixth part of 17s. 6d. to make half-a-sovereign? (14) 16s. 4d. — 7s. $8\frac{1}{2}$ d.
- (15) What sum is a quarter of £1, 19s. 10d.?
- (16) Write out a shopping sum, and work it.

Exercise 31.—Miscellaneous Exercises.

- (1) Celery is $1\frac{1}{2}$ d. per stick. How many sticks could be bought for 18s. 0d. ?
- (2) A farmer has a field 35 yards long and 28 yards broad. He puts a double row of rails all round. What length of rails is needed ?
- (3) 10 oranges are sold for 4d. How many oranges can be bought for 8 shillings ?
- (4) There are 5 windows in a house, and each has 2 panes of glass. If there are 48 houses in a street, how many panes of glass are there in that street ?
- (5) A yard is 36 inches. How many half-inches are there in 4 yards ?
- (6) A man handed 3 five-shilling pieces in payment for a turkey. It weighed 9 lb., and was 1s. 2d. per lb. How much money did he receive back ?
- (7) At Christmas the teachers give each boy an orange. How many oranges will be required if there are 76 boys in Class I., 68 in Class II., 59 in Class III., 55 in Class IV., 47 in Class V., and 37 in Class VI. ?
- (8) A grocer bought 590 pounds of bacon. He sold 136 pounds on Thursday, 87 on Friday, and 219 on Saturday. How many pounds had he still to sell ?
- (9) A man bought 840 oranges. 35 were bad. If he packed the rest into 5 boxes in equal numbers, how many were put into each box ?
- (10) How much must be added to £1, 4s. $4\frac{1}{2}$ d. to make £2, 0s. 0d. ?
- (11) $838 \text{ pens} \div 5$.
- (12) 7 boys earn 7s. 6d. per week each. How much do they earn altogether ?
- (13) $17\text{s. } 6\frac{1}{2}\text{d.} \times 5$.
- (14) Draw an oblong to show 18 square inches.
- (15) 132 boys and 141 girls went to school one morning. Eighteen of the boys and fourteen of the girls were late. How many children were in time ?
- (16) Tom earns 2s. 1d. a day, and Will earns 1s. $4\frac{1}{2}$ d. How much does Tom earn more than Will in 9 days ?
- (17) Make up a sum about measuring the desk, and work it.

Exercise 32.—Term Tests.

A.

- (1) (a) Draw a line **5·6** inches long. Show a quarter of this.
(b) Draw a line **2 $\frac{1}{4}$** inches long, and another **2 $\frac{3}{8}$** inches long.
(c) Draw an oblong **3** inches long and **2** inches wide. With crayons colour half blue, and one-eighth brown.
- (2) At a meeting there are **456** persons present. They just fill the building. If the people are seated on forms, and each form holds **8** persons, how many forms are there?
- (3) A man pays **9** boys equal wages. He pays all of them **£2, 0s. 6d.** How much is the wage of one boy?
- (4) A grocer has **36** pounds of soap. He buys **84** boxes, with **7** pounds in a box. How many pounds has he now?
- (5) Apples are **3s. 9d.** per stone. How much short of **£2, 0s. 0d.** will a barrel of apples cost which holds **9** stones?

B.

- (1) (a) If an inch stands for a mile, draw a line to stand for **4 $\frac{3}{4}$** miles.
(b) Draw an oblong to show **15** square inches.
(c) Draw a square each side **3** inches long, and colour one quarter of it blue.
- (2) A woman took **£1, 10s. 0d.** to buy things for Christmas. She bought cheese for **4s. 8d.**, cake for **3s. 8 $\frac{1}{2}$ d.**, oranges for **1s. 6 $\frac{1}{2}$ d.**, and a goose for **7s. 9d.** How much money had she then?
- (3) A man had **£2 10s. 0d.** in his pocket. He bought **6** books at **3s. 9 $\frac{1}{2}$ d.** each. How much had he left?
- (4) On a trip the train started with **564** persons. On the journey **79** left at one station, and **148** at another. How many persons went the whole distance?
- (5) Every Christmas a man gives **£2, 4s. 0d.** to be divided equally among **8** old men. How much does each get?

C.

- (1) (a) By means of a line add the following together:
 $1\frac{1}{8}$ inches, $3\frac{1}{2}$ inches, $2\frac{1}{4}$ inches.
 (b) From gummed paper cut out pieces to show $\frac{1}{2}$ an oblong, $\frac{1}{4}$ of it, and $\frac{1}{8}$ of it. Fasten these on your paper.
 (c) A line is 1·6 inches long. Draw a line 4 times as long, and tell how long it is.
- (2) A man bought 9 hens at 3s. 7½d. each, and paid 2s. 6d. for food for them. How much did he spend in all?
- (3) In a cricket match one side scored 79 runs the first innings, and 98 the next; the other side scored 89 runs the first innings, and 76 the second. How many runs was the match won by?
- (4) One box holds three hundred and sixty oranges, and another four hundred and twenty-three. How many more are there in one box than in the other?
- (5) A boy got a quarter of 15s. 0d. from his father and a fifth of 16s. 3d. from his mother. How much did he get in all?

D.

- (1) (a) Show by drawing a line how far 6 times $\frac{3}{4}$ inches will reach.
 (b) Draw an oblong 5 inches long and 4 inches wide. Colour $\frac{3}{8}$ of it blue.
 (c) Write down how wide you think the cupboard door is.
- (2) A field is 264 yards long, and 175 yards wide. How far is it round the field?
- (3) How much will the following bill come to: 9 lb. of figs at 7d. per pound, 11 lb. of dates at 5d. per lb., and 72 oranges at 5d. per dozen?
- (4) A man had £1, 2s. 6d., which he shared equally among 6 girls. How much did each girl get?
- (5) A butcher had 5s. 6d. in his drawer. A man bought 6 tongues at 2s. 7½d. each from him. How much money had he then?

Exercise 33.—Revision.

- (1) In a boys' school there are **346** scholars, in the girls' school **285**, and in the infants' **179**. How many scholars are there in the three departments?
- (2) On a shelf there are **267** Class I. exercise-books, **348** Class II. books, and **296** Class III. books. How many exercise-books are there in all?
- (3) In four boxes of oranges there are the following: **264, 188, 464**, and **76**. How many oranges are there altogether?
- (4) There were **480** sheets of paper in a packet. **97** sheets were used on Monday, **127** on Tuesday, and **89** on Wednesday. How many were left?
- (5) On a ship there are **980** passengers. **169** go first-class, **387** go second-class, and the rest third-class. How many third-class passengers are there?
- (6) A gross is **144**. A man buys **6** gross of match-boxes. How many less than **1000** is that?
- (7) What is the total amount paid for the following: A suit for **19s. 6d.**, an overcoat for **16s. 6d.**, and a pair of boots for **9s. 11d.**?
- (8) What will the following bill amount to: Flour, **12s. 9d.**; bacon, **13s. 7½d.**; and potatoes, **14s. 8½d.**?
- (9) How much does a person pay who buys **9** yards of calico at **7d.** per yard, **5** yards of flannel at **1s. 3d.** per yard, and **2** dozen reels at **2½d.** each?
- (10) A man has **£1, 0s. 0d.** He buys a pair of boots for **8s. 9d.** How much has he then?
- (11) A boy has saved **£1, 13s. 8d.** He wishes to buy a watch for **£2, 5s. 0d.** How much more must he get?
- (12) A farmer bought a pig and **6** hens for **£3, 16s. 4d.** The hens cost **19s. 6d.** How much did the pig cost?
- (13) The grocer's bill was **£1, 15s. 8d.** If I paid with two sovereigns, how much change should I receive?
- (14) How much is left out of a sovereign after paying **16s. 8½d.** for meat? (15) **£3, 4s. 5d. ÷ 7.**
- (16) Make up a sum about a man and **£1, 12s. 9d.** Work it.

Exercise 34.—Revision of Multiplication and Division.

- (1) There are **76** tickets in a box. How many are there in **7** boxes? in **9** boxes? in **5** boxes?
- (2) In a box of eggs there are **5** layers, with **136** eggs in each layer. How many eggs are there in the box?
- (3) In a railway wagon there are **139** baskets of strawberries. How many baskets are there in **6** such wagons?
- (4) At a bazaar a concert-room holds just **78** persons. It is filled **7** times. How many persons go into the room altogether?
- (5) In a box are **648** eggs. They are sold at **8** for a shilling. How many shillings are got for them?
- (6) In a bag are **578** beads. Jane and her three sisters share them equally. How many does each get?
- (7) A dealer bought **7** pairs of boots at **7s. 11d.** per pair. How much did they cost altogether?
- (8) A girl's jacket cost **13s. 8d.** How much would **6** such jackets cost?
- (9) In a shop window are **8** chairs. They are marked at **11s. 9d.** each. How much are all the chairs worth?
- (10) A man gets **12s. 9d.** for making a table. How much will he get for making **5** such tables?
- (11) At Christmas a man bought **5** turkeys for **£2, 6s. 0½d.** How much was that each?
- (12) **7** jars of lard of equal size cost **£3, 0s. 8d.** How much was each jar worth?
- (13) A man had **3** sons and **3** daughters. He shared **£2, 5s. 6d.** equally amongst them. How much did each get?
- (14) Eight ladies' hats of equal value cost **£4, 19s. 4d.** How much did one cost?
- (15) I have **£4, 0s. 0d.** I buy **9** books at **8s. 9d.** each. How much have I left?
- (16) A gardener has **£3, 0s. 0d.** He spends all but **11s. 3d.** of this on **9** hens. How much does each hen cost?
- (17) Make up a measuring sum about marbles, and work it.

Exercise 35.—The Use of Signs and Brackets.

Work the following sums in as short a way as you can :

- (1) $37 + 140 + 59 + 48$. (2) $157 + 268 + 109 + 53$.
 - (3) $(38 + 147) - (26 + 98)$. (4) $(134 + 497) - (39 + 246)$.
 - (5) $(137 \times 5) + (69 \times 4)$. (6) $(67 \times 9) + (56 \times 5)$.
 - (7) $(76 \times 7) - (49 \times 6)$. (8) $(237 \times 3) - (67 \times 8)$.
 - (9) $(495 \div 5) + (396 \div 6)$. (10) $(686 \div 7) + (756 \div 9)$.
 - (11) $(748 \div 4) - (712 \div 8)$. (12) $(657 \div 9) - (584 \div 8)$.
 - (13) 1s. $7\frac{1}{2}$ d. + 2s. $9\frac{1}{2}$ d. + 3s. $5\frac{1}{2}$ d. + 5s. $4\frac{1}{2}$ d.
 - (14) 11s. $9\frac{1}{2}$ d. + 12s. 8d. + 14s. $7\frac{1}{2}$ d. + 6s. 9d.
 - (15) 14s. $5\frac{1}{2}$ d. - 9s. $6\frac{1}{4}$ d. (16) £1, 12s. $8\frac{1}{2}$ d. - 19s. $10\frac{3}{4}$ d.
 - (17) (£1, 13s. $4\frac{1}{2}$ d. + £1, 5s. 8d.) - (18s. $10\frac{1}{2}$ d. + £1, 14s. $7\frac{1}{2}$ d.).
 - (18) $(3\text{s. } 9\frac{1}{2}\text{d.} \times 5) + (9\text{s. } 11\frac{1}{2}\text{d.} \times 7)$.
 - (19) $(11\text{s. } 3\frac{1}{2}\text{d.} \times 4) + (8\text{s. } 4\frac{1}{2}\text{d.} \times 6)$.
 - (20) $\frac{\text{£}2, 15\text{s.}}{10} + \frac{\text{£}3, 15\text{s. } 3\text{d.}}{7}$. (21) $\frac{\text{£}3, 18\text{s. } 9\text{d.}}{6} + \frac{\text{£}4, 16\text{s.}}{8}$.
 - (22) $\frac{\text{£}4, 16\text{s. } 3\text{d.}}{5} - 5\text{s. } 7\text{d.}$ (23) $\frac{\text{£}3, 18\text{s. } 4\frac{1}{2}\text{d.}}{6} - \frac{\text{£}2, 13\text{s. } 4\frac{1}{2}\text{d.}}{7}$.
 - (24) 2·4 in. + 3·5 in. + 2·8 in. (25) 4·5 in. + 3·7 in. + 8·7 in.
 - (26) $(2\cdot6 \text{ in.} \times 5) + (4\cdot3 \text{ in.} \times 6)$.
 - (27) $(3\cdot4 \text{ in.} \times 7) - (2\cdot8 \text{ in.} \times 6)$.
 - (28) $1\frac{1}{2} \text{ in.} + 2\frac{3}{4} \text{ in.} + 1\frac{1}{8} \text{ in.}$ (29) $2\frac{1}{4} \text{ in.} + 1\frac{1}{2} \text{ in.} + 2\frac{3}{8} \text{ in.}$
 - (30) $4\frac{1}{2} \text{ in.} - 2\frac{3}{8} \text{ in.}$ (31) $3\frac{3}{4} \text{ in.} - 2\frac{3}{8} \text{ in.}$
 - (32) 1 ft. 4 in. + 1 ft. 8 in. + 2 ft. 5 in.
 - (33) 2 ft. 5 in. - 1 ft. 7 in. (34) 3 ft. 7 in. - 1 ft. 9 in.
 - (35) 2 ft. 3 in. \times 6. (36) 5 ft. 9 in. \div 3.
-
- (37) How much does the following bill come to: 3 lb. of rice at $4\frac{1}{2}$ d. per lb.; 2 lb. of bacon at 11d. per lb.; 5 lb. of currants at 7d. per lb.; $\frac{1}{2}$ lb. of tea at 2s. 8d. per lb.?
 - (38) A man had 6 half-sovereigns. He bought 6 geese at 7s. 10d. each. How much had he then?
 - (39) 462 oranges were sold at 7 for 6d. How many shillings were they sold for?

Exercise 36.—11 Times Table.

- (1) A piece of calico is **11** inches wide and **86** inches long.
How many square inches are there in it?
- (2) In a newspaper there are **11** lines in an inch. How
many lines are there in a column **48** inches long?
- (3) There are **39** teams in two football leagues. If there
are **11** players in each team, how many players are
there altogether?
- (4) In a book there are **64** leaves, and each leaf is **11**
inches long. How long are all the leaves together?
- (5) The chairs in a schoolroom are placed **11** in a row.
How many rows can be made from **597** chairs?
- (6) There are **792** flowers in the wall-paper. If they are
in rows, with **11** flowers in a row, how many rows
are there?
- (7) In a box there are **891** eggs. They are sold at **11** for
a shilling. How many shillings are got for them?
- (8) A room is **693** inches wide. How many boards, each
11 inches wide, will it take to go across the room?
- (9) A man walks **11** miles a day in going to and from his
work. How many miles does he walk in **28** days?
- (10) What will **11** yards of cloth cost at **5s. 9½d.** per yard?
- (11) Boys' hats are **4s. 7½d.** each. How much will **11** cost?
- (12) A girl's hat cost **8s. 8½d.** How much will **11** cost?
- (13) Eleven pairs of socks cost **£1, 7s. 0½d.** How much
was that per pair?
- (14) In eleven weeks a man saved **£3, 3s. 8½d.** How much
did he save per week?
- (15) I give **3s. 9d.** to each of four men, and the same sum
to each of seven women. How much do I give
away in all?
- (16) Share **£3, 13s. 4d.** equally among **6** women and **5** men.
- (17) A gentleman had **8** bags, each containing **77** nuts. To
how many boys could he give **11** nuts each?
- (18) A farmer has **69** sheep. His neighbour has ten times
as many. How many have they together?
- (19) Make up a sum about **11** pigeons, and work it.

Exercise 37.—Additional Exercises.

- (1) A boy takes £2, 0s. 0d. to pay the following bill:
Flour, 14s. 6d.; tea, 5s. 8d.; bacon, 9s. 8d.; cheese,
2s. 8d. How much does he bring home?
- (2) How much does the following bill come to: 4 lb. of
butter at 1s. 4d. per lb.; 8 lb. of sugar at 3d. per lb.;
3 stones of flour at 1s. 5d. per stone; 2 lb. of tea at
2s. 8d. per lb.?
- (3) One man earns $9\frac{1}{2}$ d. an hour, and another $10\frac{1}{2}$ d. an hour.
How much do they earn together in 11 hours?
- (4) A woman went to the shop with 3 half-crowns and
5 florins. If she bought 9 yards of serge at 1s. $9\frac{1}{2}$ d.
per yard, how much had she then?
- (5) On a wagon there were 11 sacks of flour, each
weighing 18 stones, and 9 sacks of wheat, each
weighing 16 stones. How many stones were on
the wagon?
- (6) There are 873 oranges in two boxes. They are sold at
9 for 6d. How many sixpences do they sell for?
- (7) A crate contains 969 eggs. 87 are broken. The others
are placed in small boxes, each holding 9. How
many boxes are needed?
- (8) (a) $(6s. 9\frac{1}{4}d. \times 7) - (5s. 4\frac{1}{2}d. \times 8)$.
(b) £1, 1s. 10d. - 18s. $9\frac{1}{2}$ d.
(c) $(£1, 10s. 4d. \div 7) + £1, 18s. 3d.$
(d) 3·7 in. + 8·4 in. + 5·6 in. + 9·3 in.
(e) $3\frac{1}{4}$ in. + $2\frac{3}{8}$ in. + $3\frac{1}{2}$ in.
- (9) After spending 17s. $9\frac{1}{2}$ d., I find that I have 6s. $10\frac{1}{2}$ d.
left. How much had I at first?
- (10) A man bought a watch for £2, 15s. 6d., and a chain
for a third of that sum. How much did he spend?
- (11) Measure your exercise-book, and draw a plan of it
half-size.
- (12) How much is 7s. $8\frac{1}{2}$ d. less than 16s. 4d.?
- (13) How many feet have 59 sheep and 78 lambs?
- (14) Make up a sum about spending 16s. 0d., and work it.

Exercise 38.—Measuring, Folding, and Cutting an Envelope.

- (1) Measure your envelope, and find how far round it is.
- (2) Find how far it is round six such envelopes.
- (3) Measure the triangle on the left side of the back of your envelope, and find how far it is round.
- (4) How far is it round **8** triangles the same size?
- (5) What space is covered by your envelope when it is folded? How much space will **9** such envelopes cover?
- (6) Draw an oblong half the size of your envelope. Make an oblong or square twice the size of this oblong.
- (7) Find how many square inches there are in the oblong drawn in question **6**. How many square inches are there in **8** oblongs the same size?
- (8) Draw a figure one-quarter the size of the envelope when folded. Draw all the lines you see on the back of the envelope, and find out how long each line is.
- (9) Add together the lengths of all the lines you see on the back of the envelope.
- (10) There are **75** envelopes the same size as yours in a box. How far would they reach if put end to end?
- (11) A drawing-book is **11** inches long and **9** inches wide. What is the total area of **8** such books?
- (12) A causeway is **267** yards long and **3** yards wide. How many square yards are there in the causeway?
- (13) A newspaper has **16** pages, with **8** columns on a page. How many columns are there in **7** such newspapers?

- (14) The railway fare to the seaside for **9** boys was **£1, 11s. 10½d.** How much was that for each boy?
- (15) A playground is **24** yards long and **23** yards wide. How far will a boy go who runs six times round it?
- (16) What sum is five times less than **£3, 7s. 11d.**?
- (17) From the greatest of these three numbers take the least: **76, 102, 130.**
- (18) What number is a quarter of **356**?
- (19) Write out a sum about a square garden, and work it.

Exercise 39.—12 Times Table.

- (1) A chocolate-box is **12** inches long. How many inches will **83** of these boxes reach?
 - (2) A tram rail is **12** feet long. How many would be required to reach **984** feet?
 - (3) In one of the bags at the tram-office there are **876** pennies. How many shillings are they worth?
 - (4) A boy's cap cost **3s. 6½d.** What will a dozen such caps cost?
 - (5) A greengrocer has a box of oranges containing **480**, and another holding **372**. If he sells them in dozens, how many dozens does he sell?
 - (6) A dozen yards of calico cost **6s. 6d.** How much will a piece measuring **108** yards cost?
 - (7) A dozen books cost **£1, 10s. 6d.** Find the price of each.
 - (8) A man needed **1000** oranges, but the greengrocer had only **76** dozen. How many was he short?
 - (9) In a mill are **6** rows of windows, with **12** windows in a row. Each window has **9** panes of glass. How many panes of glass are there in the mill?
 - (10) A draper paid **£2, 0s. 0d.** for a dozen boys' shirts at **1s. 11½d.** each. How much change would he get?
 - (11) A bookseller bought **12** books at **3s. 9d.** each, and sold them at **4s. 6d.** each. How much did he gain?
 - (12) A joiner has a board **11 ft. 9 in.** long, another **12 ft. 7 in.** long, and another **14 ft. 8 in.** long. How many inches are there in the length of all these?
 - (13) Three flour-wagons, each carrying **24** sacks of flour, pass the school gate. If there are **12** stones in each sack, how many stones are there altogether?
 - (14) A man bought a dozen pairs of gloves at **3s. 11d.** per pair, and a dozen pairs of socks at **1s. 7½d.** per pair. How much did he spend?
-
- (15) A man walked **5** times round a field **48** yards long and **37** yards wide. How far did he walk?
 - (16) Make up a sum about a dozen boys and half-a-dozen girls, and work it.

Exercise 40.—Miscellaneous Exercises.

- (1) How many dozens are there in 710?
- (2) Each of 11 classes contains 19 boys and 18 girls. How many children are there in all the classes?
- (3) Harry's wages are 5s. 6d. a week, Tom's are 9d. more than that, and Sam's are 1s. 6d. more than Tom's. How much do they earn together?
- (4) 760 books are to be packed in one large case and 4 smaller cases. If 268 are put into the large case, how many should be put into each of the smaller cases, if they are all the same size?
- (5) When paying for 11 yards of flannel, I gave the draper a sovereign, and he gave me 2s. $1\frac{1}{2}$ d. change. How much was the flannel per yard?
- (6) What sum is five times less than £4, 14s. $4\frac{1}{2}$ d.?
- (7) £5 was to be shared among 8 women and a man. If the man got 17s. 8d., what should each woman get?
- (8) Share £4, 17s. 3d. among 9 men. How much is left?
- (9) After spending £2, 17s. $8\frac{1}{2}$ d., I had 18s. $11\frac{1}{2}$ d. left. How much had I at first?
- (10) Add both vertically and horizontally the following:

	(a)	(b)	(c)	(d)
(e)	3s. $2\frac{1}{2}$ d.	4s. $8\frac{1}{4}$ d.	15s. 9d.	6s. $7\frac{1}{2}$ d.
(f)	10s. $7\frac{1}{4}$ d.	5s. $2\frac{1}{2}$ d.	7s. $8\frac{1}{2}$ d.	9s. $8\frac{3}{4}$ d.
(g)	8s. $11\frac{1}{2}$ d.	17s. $3\frac{1}{4}$ d.	14s. $9\frac{3}{4}$ d.	2s. $4\frac{1}{2}$ d.
(h)	16s. $5\frac{1}{2}$ d.	5s. $10\frac{1}{4}$ d.	9s. $4\frac{1}{2}$ d.	6s. $2\frac{3}{4}$ d.
(i)	9s. $3\frac{3}{4}$ d.	16s. $4\frac{3}{4}$ d.	8s. $10\frac{1}{2}$ d.	15s. $7\frac{3}{4}$ d.
- (11) The sum of three guineas was shared equally among 3 men and 5 women. How much did each get?
- (12) (a) £4, 13s. $6\frac{1}{4}$ d. \div 12; (b) £4, 17s. $3\frac{1}{4}$ d. \div 11.
- (13) What number is 87 more than 236?
- (14) A man earns £1, 11s. 6d. a week, and his son earns half that. How much do they earn together?
- (15) Take £3, 19s. $8\frac{1}{2}$ d. from £4, 10s. 6d.
- (16) A man had a dozen turkeys. 3 died, and he sold the rest for 10s. $8\frac{1}{2}$ d. each. What did he get for them?

Exercise 41.—Additional Exercises.

- (1) A door is **8** feet high and **3** feet wide. There are **7** such doors in a house. How many square feet are there in all the doors?
- (2) One of these doors costs **11s. 9d.** If they are all alike, what will the **7** doors cost?
- (3) It took a man **204** hours to put the floor into six rooms all the same size. How many hours did it take to put down one floor?
- (4) A farmer had **694** eggs. He packed **298** into a box, and sold the rest at **9** for a shilling. How much did he get for them?
- (5) Eleven men went on a railway journey. The fare was **8s. 10½d.** each. How much did they spend altogether on railway fares?
- (6) A lady gave each scholar at a school **1d.**, and she needed **78** shillings. How many scholars were there?
- (7) A grocer sells eggs at a penny each. He has a box containing **972**. How many shillings will he get for them?
- (8) A man earned **£2, 10s. 0d.** per week. He spent **7s. 6d.** on rent, **19s. 8d.** on food, **8s. 7½d.** on clothes, and **5s. 8d.** on coal and gas. How much has he left?
- (9) Four boards are the following lengths: **14 ft. 8 in.**, **16 ft. 7 in.**, **9 ft. 6 in.**, and **12 ft. 5 in.** How long are they altogether?
- (10) At a bazaar **296** persons were present on the first day, **386** on the second, and **178** on the third. How many short of **900** were present?
- (11) I made a garden **46** yards long and **37** yards wide, and fenced it all round. How long was the fence?
- (12) A mother took her three girls to the seaside. If the mother's ticket cost **7s. 10d.**, and the girls went for half-fare, how much did all the tickets cost?
- (13) How many legs have **37** dogs, **29** cats, and **58** hens?
- (14) How much is **87×8** greater than **68×9** ?
- (15) How much is **57×6** less than **84×7** ?
- (16) Make up a sum about measuring the desk, and work it.

Exercise 42.—Revision of Money Rules.

- (1) A greengrocer started from home with 18s. 11½d. He took £1, 16s. 7½d. in the morning, £1, 12s. 8½d. in the afternoon, and 11s. 4d. at night. How much money had he at the end of the day?
 - (2) A man spent £4, 8s. 6d. on a pig and a sheep. The pig cost £2, 19s. 9d. What did the sheep cost?
 - (3) What will 9 yards of silk cost at 7s. 9½d. a yard?
 - (4) A father bought each of his 5 sons a pair of boots at 13s. 8d. per pair. How much did the boots cost?
 - (5) $\frac{17\text{s. } 4\frac{1}{2}\text{d.}}{6} + \frac{£1, 7\text{s. } 8\frac{1}{2}\text{d.}}{7}$.
 - (6) A farmer bought 6 lambs at 14s. 8½d. each. He paid for them with a five-pound note. How much change did he get?
 - (7) A grocer bought 7 stones of currants for £2, 17s. 2d. How much was that for 1 stone?
 - (8) The railway fares for 8 men amounted to £2, 5s. 0d. What was the fare for 1 man?
 - (9) A man had £2, 10s. 0d. in his pocket. He bought a book-shelf for £1, 2s. 6d., and spent the rest on 6 books of equal value. How much did each cost?
 - (10) A careless boy wrote 10½d. for his answer instead of 10½s. How much was his answer wrong?
 - (11) I bought 9 hats at 5s. 4d. each, and sold them at 7s. 2d. each. How much did I gain?
 - (12) After buying 6 hats at 13s. 9½d. each, a draper had 9s. 8½d. left. How much had he at first?
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- (13) 6 boys had 59 tickets each, and 9 other boys had 68 each. How many tickets had they altogether?
 - (14) A girl packs 12 reels of cotton in a box. How many boxes will she need for 864 reels?
 - (15) What must I pay for 7 hats at 11s. 6d. each, and 7 ties at 2s. 3d. each?
 - (16) What is the difference between 387 and 502?
 - (17) Make and work a sum about spending £2, 0s. 0d.

Exercise 43.—Shopping Sums.

- (1) What will the following bill come to: 4 lb. of mutton at $10\frac{1}{2}$ d. per lb.; 3 lb. of suet at $6\frac{1}{2}$ d. per lb.; 6 lb. of lamb at 1s. $1\frac{1}{2}$ d. per lb.?
 - (2) What would a woman pay for 7 lb. of potatoes at $2\frac{1}{2}$ d. per lb., 3 lb. of butter at 1s. 7d. per lb., 2 lb. of tea at 3s. 8d. per lb., 5 lb. of bacon at $10\frac{1}{2}$ d. per lb.?
 - (3) A girl went to the grocer's shop with £2, 0s. 0d. in a purse. She spent £1, 18s. $9\frac{1}{2}$ d. How much change should she have?
 - (4) Find the total cost of 6 lb. of cheese at $10\frac{1}{2}$ d. per lb., $4\frac{1}{2}$ lb. of ham at 1s. 0d. per lb., 4 lb. of currants at $7\frac{1}{2}$ d. per lb., $1\frac{1}{2}$ lb. of tea at 2s. 6d. per lb.
 - (5) How much will the following articles cost altogether: 4 ties at $7\frac{1}{2}$ d. each; 3 pairs of gloves at 2s. $8\frac{1}{2}$ d. per pair; 6 collars at $6\frac{1}{2}$ d. each; 8 handkerchiefs at $6\frac{1}{2}$ d. each?
 - (6) I gave £2, 0s. 0d. in payment for 7 yards of cloth. If I received 19s. $10\frac{1}{2}$ d. change, how much was the cloth per yard?
 - (7) A dozen brushes were bought at 2s. $9\frac{1}{2}$ d. each, and sold at 4s. 6d. each. What was the total gain?
 - (8) A man bought 12 books for £1, 10s. 0d., and sold them for £2, 10s. 6d. What did he gain on each?
 - (9) Find the total cost of 6 books at 1s. $8\frac{1}{2}$ d. each, 3 dozen pens at 1s. $4\frac{1}{2}$ d. per dozen, 12 bags at 1s. $6\frac{1}{2}$ d. each, $2\frac{1}{2}$ dozen large envelopes at 1s. 8d. a dozen.
-
- (10) A box contains 96 pens. How many dozens can be taken from 9 such boxes of pens?
 - (11) A boy walks 229 yards to school. How many yards will he walk in a day in going to and from school if he goes home to dinner?
 - (12) A can holds 8 pints of water. How many times can it be filled out of 3 barrels, each holding 128 pints?
 - (13) I had £1, 14s. 7d. left after shopping. If I had spent £1, 13s. $10\frac{1}{2}$ d., how much had I at first?
 - (14) Make up a sum about Harry going to the shop with 3 half-crowns, and work it.

Exercise 44.—Use of Signs and Brackets.

- (1) (a) $234 + 197 + 145 + 38$; (b) $300 + 49 + 487 + 86$.
- (2) (a) $(137 \times 6) - (85 \times 3)$; (b) $(159 \times 4) - (67 \times 7)$.
- (3) (a) $(693 \div 9) + (744 \div 8)$; (b) $(861 \div 7) + (756 \div 6)$.
- (4) (a) £5, 0s. 0d. — £2, 13s. 4½d.;
(b) £3, 10s. 0d. — £1, 17s. 8½d.
- (5) (a) $(£1, 13s. 8½d. \times 3) - (7s. 9½d. \times 7)$;
(b) $(14s. 10½d. \times 4) + (5s. 9½d. \times 8)$.
- (6) (a) $\frac{£2, 17s. 4d.}{8} + \frac{£3, 14s. 2d.}{5}$;
(b) $\frac{£4, 16s. 3d.}{7} - \frac{£2, 19s. 7½d.}{9}$.
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- (7) A man buys 792 stones of potatoes, and puts them into bags, each holding 8 stones. How many bags does he require?
- (8) A gardener bought 12 dozen sticks, each 6 feet long. How long were they altogether?
- (9) A grocer gave £2, 0s. 0d. in payment for 9 ox-tongues at 2s. 9½d. each. How much change did he get?
- (10) I own 9 houses, and the rent of each is 6s. 9d. a week. How much rent do I receive in 2 weeks?
- (11) A boy has a sheet of paper which measures 26·8 inches long. He cuts off 18·9 inches. How much is left?
- (12) A farmer had a calf worth £4, 16s. 8d. He exchanged it for 8 little pigs. How much was each pig worth?
- (13) A lady pays this bill for a dress: 7 yards of cloth at 4s. 9d. per yard; making, 10s. 6d.; buttons and trimming, 11s. 4½d. How much does the dress cost?
- (14) John bought 9 hens at 3s. 3½d. each, and sold them at 4s. 0d. each. How much profit did he make?
- (15) What is the difference between 88×9 and 99×8 ?
- (16) Mary earns 12s. 6d. per week, and Annie earns 1s. 9½d. more than Mary. How much do they earn together in 4 weeks?
- (17) Make up and work a sum about 7 boys and £3, 17s. 7d.

Exercise 45.—Additional Exercises.

- (1) A man had £5, 0s. 0d. He spent £2, 12s. 6d. on a suit of clothes, and 18s. 9d. on a pair of boots. How much had he then?
- (2) A man has 7 boys working for him. He pays each of them 9s. 8d. per week. How much does he pay altogether?
- (3) A greengrocer gave £2, 0s. 0d. in payment for a barrel of apples containing 9 stones. If the apples were 3s. 8½d. per stone, how much change would he receive?
- (4) A football-field is 124 yards long and 88 yards wide. A boy runs twice round it. How many yards has he gone?
- (5) A woman bought the following articles at the painter's shop: 3 gallons of oil at 1s. 2d. per gall.; 6 rolls of wall-paper at 9½d. per roll; 5 bottles of varnish at 1s. 10d. per bottle; 2 brushes at 1s. 4½d. each. What did she pay?
- (6) A fishmonger sold 12 lb. of fish at 6½d. per lb., and 7 lb. at 9½d. per lb. If he had 3s. 8½d. at first, how much had he after he had sold the fish?
- (7) 36 inches make a yard. How many inches are there in 9½ yards of string?
- (8) A mother bought 7 yards of muslin, at 1s. 9½d. per yard, for her daughter's dress. It cost 5s. 6d. making, and the trimming cost 3s. 9½d. How much did the dress cost?
- (9) A dealer had £1, 10s. 9d. in his pocket. During the day he sold a sofa for £2, 10s., and 4 chairs at 14s. 8½d. each. How much money had he then?
- (10) What is the space covered by a piece of carpet 29 feet long and 8 feet wide?
- (11) A boy saved 16s. 8d. one year, 14s. 9½d. the next, and 17s. 8d. the next. How much did he save in all?
- (12) A boy spent 6d. every week for 62 weeks. How much did he spend in all?
- (13) Make up a sum about saving, and work it.

Exercise 46.—Measuring and Cutting—Areas.

- (1) The teacher's ticket-box is **13** inches long and **9** inches wide. How many square inches are there in the lid? How many square inches in **7** such lids?
- (2) This box is **7** inches high. How many square inches are there in the outside of both long sides?
- (3) How many square inches in the outside of the two ends?
- (4) Find how many square inches in the outside of both sides, the two ends, the top, and the bottom.
- (5) If a quarter of an inch stands for a farthing, draw a line worth **6 $\frac{3}{4}$ d.**
- (6) If the blackboard in your class-room measures **12** feet long and **6** feet high, what is the area of **7** blackboards all the same size?
- (7) In a causeway there are **846** square feet. It is **9** feet wide. How long is it?
- (8) Write down how long you think the top of your teacher's desk is. Now measure the length, and write this underneath. How much are you wrong?
- (9) There are **7** houses in a row. Each house has a causeway **15** feet long and **6** feet wide. What is the area of all the causeways?
- (10) In front of a house there is a grass-plot **65** feet long and **37** feet wide. If a boy walks **4** times round it, how far does he go?
- (11) In a joiner's yard are **49** goal-posts, each **9** feet long. How long are they altogether?
- (12) There are two bowling-greens. Each is **40** yards long and **40** yards wide. Boards are placed round each. What is the length of the boards round both greens?
- (13) In a park are **4** flower-beds, each **15** feet long and **9** feet wide. What is the area of all these beds?
- (14) Round a room are **138** boards. Each board is **6** inches wide. How many inches is it all the way round?
- (15) Make up a sum about buying a cricket-bat, a ball, and a cap, and work it.

Exercise 47.—Additional Exercises.

- (1) If a quarter of an inch stands for a farthing, draw a line worth 5 times $1\frac{1}{4}$ d.
- (2) A door is 8 feet high and 4 feet wide. How many square feet are there in 9 such doors?
- (3) Pins are placed 10 in a row on a paper. How many pins are there in 78 rows?
- (4) In a trunk were packed 9 blouses of equal value. The trunk and blouses cost £3, 10s. 6d. If the trunk cost 9s. 9d., how much did each blouse cost?
- (5) How many dozen oranges are there in two boxes, each containing 486 oranges?
- (6) A jam-maker ordered 1000 pounds of strawberries. The gardener sent him 89 baskets, each containing 7 lb. How many pounds were short?
- (7) An engine pulls 39 wagons full of coal. Each wagon contains 8 tons of coal, and each empty wagon weighs 3 tons. What is the total weight pulled by the engine?
- (8) A railway compartment holds 10 persons. How many compartments will be required for 960 persons? If there are 8 compartments to one carriage, how many carriages will there be?
- (9) A man uses 9 inches of wire in making a lady's hat-pin. How many feet of wire will be needed in making 144 such hat-pins?
- (10) A collier and his son work together. The son earns 11s. 9d., and his father earns 6 times as much. How much do they both earn?
- (11) A man paid four guineas for a suit of clothes. The trousers cost £1, 2s. 6d.; the waistcoat cost 18s. 9d. What did the coat cost?
- (12) A bootmaker took £5, 0s. 0d. with him to Stafford. He spent all but £1, 14s. 1d. on 7 pairs of boots of equal value. How much were the boots per pair?
- (13) It takes 5 yards of cloth at 2s. $9\frac{1}{2}$ d. per yard to make a dress. How much would the cloth for 7 such dresses cost?
- (14) $966 \text{ caps} \div 7$.

Exercise 48.—Miscellaneous Examples.

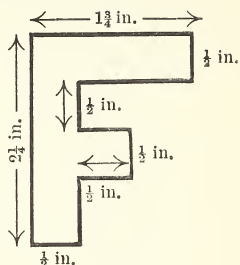
- (1) A drawing-book is **13** inches long and **11** inches wide. How far is it twice round the cover?
- (2) There are **12** months in a year. Grandmother is **57** years of age, and mother is **26** years of age. How many months have they both lived?
- (3) A boy sees a watch marked **£2, 10s. 0d.** He has **£1, 18s. 9½d.** in his box. How much more must he get before he can buy the watch?
- (4) **3** barrels of apples each weigh **126** pounds, and **4** others weigh **142** pounds each. What is the weight of all the barrels?
- (5) A man bought **1000** bricks. He put **244** into a pile, and the rest were carried away by a boy. If the boy took **9** bricks at a time, how many times did he come?
- (6) The smaller hand of a clock goes round once in **12** hours. How many times will it go round in **984** hours?
- (7) A woman paid the butcher **13s. 9d.**, the baker **7s. 10½d.**, the grocer **6s. 11½d.** If she had **18s. 9d.** left, how much had she at first?
- (8) How much will a man have left out of **£3, 3s. 0d.** after paying for **8** books at **5s. 7½d.** each?
- (9) A youth earns **18s. 0d.** per week. Out of this he saves **2s. 9d.** How much does he spend in **5** weeks?
- (10) A farmer sold half-a-dozen fowls at **3s. 11d.** each, and **8** geese at **6s. 9d.** each. How much did he get for the lot?
- (11) A draper had **28** yards of calico in his shop. He bought **7** pieces, each **96** yards long. How many yards had he then?
- (12) A class-room has **8** small panes of glass, each **11** inches long and **6** inches wide. What is the area of all the panes?
- (13) A man bought a sheep for **£1, 18s. 6d.**, and sold it so as to gain **7s. 9d.** What did he sell it for?
- (14) Make up and work a sum about spending three guineas.

Exercise 49.—Examination Tests.

A.

- (1) (a) Draw a figure $2\frac{1}{2}$ inches long and $1\frac{1}{2}$ inches wide.
Make another figure twice the size.

- (b) Draw the letter **F** the size shown by the figures marked on the drawing. (i.) What is the combined length of the two longest sides? (ii.) How far is it all round?



- (c) Show **15** square inches on your paper.
- (2) An exercise-book measures **13** inches long and **8** inches wide. How much space will **9** such books cover?
- (3) A man sold **5** books at **18s. 9d.** each. How much did he get for them?
- (4) A page has **26** lines, with **6** words in a line, and **6** letters in a word. How many letters are there in all?
- (5) Milk is **3d.** a quart. A milkman delivers **8** quarts in the morning and **9** quarts at night. How much money will he get for his milk in a week (**7 days**)?

B.

- (1) (a) Draw an oblong **3** inches long and $2\frac{1}{2}$ inches wide.
Colour $\frac{1}{2}$ blue, $\frac{1}{4}$ red, and $\frac{1}{8}$ brown.
- (b) If a quarter of an inch is worth a farthing, draw a line worth $6\frac{3}{4}$ d.
- (c) Show **18** square inches on your paper.
- (2) After paying for **7** lambs at **12s. 9d.** each, a butcher had **9s. 8d.** left. How much had he at first?
- (3) A man has **56** stones of bran, and he buys **57** sacks, with **11** stones in each. How many stones has he then?
- (4) A lady spent **£1, 18s. 7½d.** at one shop, **19s. 8d.** at another, and **12s. 5d.** at another. How much did she spend in all?
- (5) Tom has just one-eighth of his father's money. The father has **£3, 17s. 8d.** How much has Tom?

C.

- (1) (a) Draw a line 1·6 inches long, and another 5 times as long.
 (b) Show 2 square inches and 2 inches square on your paper.
 (c) Draw a 3-inch square, and colour one-eighth of it blue.
- (2) A man paid £2, 4s. 4½d. for 5 railway-tickets, all of the same value. How much was each ticket?
- (3) What does the following bill come to: 3 chickens at 2s. 3½d. each; 5 lb. of fish at 7½d. per lb.; 2 geese at 6s. 7d. each?
- (4) In a toy-shop there are 3 boxes containing marbles. One box holds 267, another 368, and the third 179. They are sold at 11 for a penny. How many pennies are they sold for?
- (5) Write down a sum about the furniture in your house, and work it.

D.

- (1) (a) A line is 2¾ inches long. Draw one 3 times as long.
 (b) If an inch stands for 2d., draw a line worth 8½d.
 (c) Draw an oblong 5 inches long and 3 inches wide. If a half and a quarter are coloured, how much of the oblong is not coloured?
- (2) A mother and her 3 sons went to the seaside. The mother's fare was 9s. 10d., and each boy went for half-fare. How much did all the fares amount to?
- (3) In a road there are 28 houses. If each house has 4 windows, and there are 8 panes of glass in a window, how many panes are there in all the houses?
- (4) 12 yards of cloth cost £4, 17s. 6d. What is the cost of 1 yard?
- (5) A farmer had 596 sheep on his farm. He sold 297, and then brought his flock up to 500 by buying more. How many did he buy?

SUITABLE OBJECTS TO BE DRAWN AND CUT OUT BY THE PUPILS.

